

# ST. BARTHOLOMEW'S HOSPITAL JOURNAL



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## EDITORIAL

Medicine at the beginning of the present century was still a relatively simple and uncomplicated art. The previous one hundred and fifty years, it is true, had seen spectacular advances; vaccination had done much to remove the scourge of smallpox, and the advances in anaesthetics and bacteriology had broadened the scope of surgery. Through the concepts first of anti-sepsis, and then asepsis, the patients' prospects of recovery had been much improved. X-rays, too, were being developed as a valuable aid to diagnosis. Nevertheless, it was still possible for an individual to be well versed in most of the branches of medicine. Specialisation in medicine, surgery or obstetrics was well established, but it was not uncommon for one or more of these specialities to be combined with general practice. Nor were the specialities as closely associated with hospitals as is the case today. It was by no means uncommon for major surgery to be undertaken in the patient's own home, with his own doctor as anaesthetist. Domiciliary visits by Consultants were far commoner than today, and it was only among the poorer classes that hospitalisation was really necessary.

Under this system the General Practitioner was the prop and stay of his patient in time of crisis. He alone knew the patient's full history and background, and though Consultant opinion might be sought, the G.P. still remained visibly in charge of his patient's

health and well-being. Professor T. F. Rodger\* has called attention to the fact that the General Practitioner has traditionally been something more than a diagnostician—he is a unique type of psychotherapist. In primitive societies the medicine man, invested with strong magic powers, is enabled to exert powerful therapeutic effects through suggestion. In the rôle of the priest-physician he was likewise able to help his patients through the power of prayer and the exorcism of evil. "The doctor still retains much of his traditional status, but in his newer more competent technical rôle he sometimes finds it irksome to be regarded irrationally as a purveyor of magic or to be burdened with confidences and intimacies which often seem irrelevant to his task and which he would gladly see his patients take elsewhere."

In recent years the glamour of medicine has, as far as the public is concerned, shifted to the hospital. It is here that the modern dramas are played out, and it is here that the full battery of investigations can be trained on the patient. The Consultant has at his command vast technical resources, and the G.P., once his patient has been warded, has to await the progress reports which will be sent to him in due course. Inevitably it would seem, the General Practitioner's prestige has taken a knock.

\* Textbook of Medical Treatment ed. Dunlop, Davidson and Alstead Livingstone

The advent of the N.H.S. has, according to some authorities, struck a further blow at the status of the G.P. The capitation fee has meant that the practitioner is under permanent contract to treat the majority of his patients, and in some circles this has led to a notion of a master-servant relationship. Certainly the rôle of unpaid tax-collector, collecting prescription fees, is not becoming.

Be that as it may, the practitioner himself has recently done his best to shed many of the symbols of his traditional rôle. Gone are the top hat and professional dress, his surgery is businesslike and often his manner is brisk, discouraging superfluities of conversation. Yet, in spite of this, his prestige persists, shared now by his auxiliaries—nurses, social workers, physiotherapists, and the like—is still as powerful as ever to sway the emotions of his patients.

The doctor-patient relationship is an essential tool of psychotherapy which Freud showed was as important as the uncovering of repressed material. In psychoanalysis this relationship is known as the *transference situation* because in the course of treatment emotions formerly attached to other people are transferred to the doctor, who becomes the object of fluctuating emotions, both positive and negative. This situation is not confined to psychoanalysis, something similar plays a part in all therapeutic relationships. "All sick patients need psychotherapy in the sense that the emotional significance of the doctor-patient relationship can never be neglected."

In times of stress an individual leans on another individual, not on a team, though this team may be essential for the proper diagnosis and treatment of his disease. The Consultant is unable to spare the time or devote the necessary interest to individual

patients to fulfil this need. At the other extreme, the young houseman is scarcely in a position to undertake this function. Who, then, is to lead the team? The answer every time must be the General Practitioner, he alone has a full knowledge of the patient in his own environment, and if the whole patient is to be treated instead of only his disease it is essential that the consultant shall look to the G.P. as leader and co-ordinator of the team.

The general practitioner must also remain the friendly healer of all the quasi and paramedical ills which his patients may lay before him. The patient must have one person in whom he can confide and on whom he can unburden himself of difficulties which may affect his health. The G.P. must be his guide, mentor and friend. It follows from this that he must have a broad understanding of social needs and perhaps more training in social case work. In this way he will not be competing at their level with his consultant colleagues.

The G.P. must take more interest in mental health (surely one of the most pressing problems of our day) as his intimate knowledge of the patient and his background allow prompt treatment of minor problems and shed valuable light on cases which may have to be passed on for specialist opinion and treatment.

Preventive medicine and Public Health are also important fields for the G.P., but it is in the realms of psychiatric and social medicine that he may use, consolidate and maintain his prestige and influence to best advantage.

To this end it is to be hoped that much greater emphasis will be placed on the teaching of these subjects in our medical schools.

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The Medical College prospectus for the academic year 1959-60 lists, among the recreational facilities offered to the students, squash courts and tennis courts at Charterhouse and Chislehurst. At the meeting of the Students' Union Council, held on April 13th, the Secretary of the Squash Club called the attention of the Council to the steadily decreasing revenues from booking fees for the squash courts, and asked the Council to approve a plan to fix special locks to the doors of the courts which could only be

opened by the insertion of a sixpence. The Secretary attributed the declining revenues to the current tendency to play "on spec" as opposed to booking the court well in advance. A similar trend has been noted in the booking of the Charterhouse tennis courts. The Secretary went on to say that although the Squash Club was not financially embarrassed by the fall in income, a steady flow of booking fees had, in the past, enabled them to manage on a correspondingly reduced grant from the Students' Union.

It was pointed out that there is no booking fee for the tennis courts at Chislehurst, and it was asked if some sort of parking meter would, in future, be attached to the goal posts used for soccer, rugby and hockey. These points were countered by the President in a ruling, the rationale of which is more than obscure, namely that the pitches and courts at Chislehurst are "part of the amenities," whereas the tennis and squash courts at Charterhouse are not!

Now no-one can reasonably object to paying sixpence for the privilege of booking a court for squash or tennis, but surely there can be no justification for exacting a capitation fee of sixpence only from those people who want to play squash. All those who

enjoy the sporting facilities provided by the Medical College should object to this anomaly.

Christmas and Easter are both national holidays, at which time the domestic staff might reasonably expect some easing of the duties which they perform throughout the year. At Christmas the refectory in College Hall is closed and meals are provided in the Hospital, but this Easter both refectories were shut on Good Friday and on Easter Monday.

It is to be hoped that next year arrangements will be made which will allow more adequately for the nutrition of those people who stay on to work.

#### Abernethian Society

On April 21st, Mr. D. M. Jackson, M.D., F.R.C.S., Director of the Burns Unit at the Birmingham Accident Hospital, addressed the Society on the "Present Treatment of Burns."

From the medical point of view, a burn is an incident that is followed by a disease with complications. The complications are shock, sepsis and scarring. The treatment of shock is often carried out on the basis of a formula, which he deplored, and he emphasised that every case should be treated on a rational basis. There are five guides to a rational treatment of shock which are reliable when regarded as a whole, but which can be unreliable if used as isolated criteria. The physical signs can be regarded as the first guide. The patient will be cold, pale, restless and with a low blood pressure, but these signs will not have developed if the patient is observed within half an hour of the burn. This is because loss of fluid from the vascular system takes place slowly into a damaged tissue after a burn. As a general guide, a child with 10 per cent of the body burnt, or an adult with 15 per cent, will probably develop clinical shock. The second guide is the haematocrit from which the loss of vascular fluid can be calculated unless there was extensive red cell destruction also as a result of the burn. Thirdly, the urine output should be observed. This should not be allowed to fall beneath 20 ml/hour for a child or 35 ml/hour for an adult. The plasma volume itself can be measured and the fluid

lost calculated, and finally the blood volume can be measured using red cells labelled with radioactive phosphate or chromium.

After an extensive burn there are two periods of haemoglobinuria. This may be sufficiently serious to cause a severe anaemia if more than 40 per cent of the body surface is burnt. The first occurs in the first and second hours after the burn and represents haemoglobin from the direct destruction of red cells. The second occurs 24 hours later and may be the most serious. The cause of the red cell destruction at this time is not known but auto-immunity has been invoked as an explanation.

Considering the treatment of the burn itself, Mr. Jackson emphasised that a "new burn is a clean wound" but that, at present, more patients die from subsequent infection than any other cause. Burns can either be treated by complete coverage of the area with infrequent changes of dressing under sterile conditions, or by the "exposure technique," in which the burnt area is kept dry. It is then a poor medium for bacterial growth. Both methods are very successful if used in the appropriate circumstances. In either case the burnt area is treated with penicillin cream, but systemic antibiotics are not employed. The penicillin inhibits the growth of haemolytic streptococci which interfere with the subsequent grafting, but staphylococcal and pyocyanus infections are still troublesome. The best treatment is excision of the burnt area followed by repair with split skin grafts on the same day, if possible,

but there are various contra-indications to this. If complete coverage of the area with autografts is not possible, the grafting can be done in thin strips with the autografts interspersed with homografts. The latter will come off after 14 days, but the autografts spread and often unite with each other as the homografts come off.

It is obviously important to know whether full skin destruction has occurred before the area is grafted. The appearance of whiteness or blanching on pressure are poor guides, but sensitivity to sharp pin-prick is better. If the grafting operation is carried out in an ischaemic field such as could be obtained in an arm or a leg, the appearance of the subcutaneous fat is important. If this remains pink it means stasis has occurred in the vascular bed, and such fat should be excised. Mr. Jackson then discussed in more detail the techniques of grafting. He illustrated his talk with coloured slides and answered numerous questions. In regard to prognosis, he said this was directly related to the person's age and that though the cure of those who survived was more complete than previously, the mortality of burns had not decreased in the last ten years.

#### Lt.-Colonel Groves

We learn, with deep regret, of the death of Lt.-Col. J. N. Groves, D.S.O., who was better known to many of his friends as "Bash." Speaking at the funeral service, held at St. Luke's Church, Chelsea, the Revd. Ross Hook mentioned Colonel Groves' athletic prowess, which led him to box for both Cambridge and Bart's.

Colonel Groves had, however, a much more gentle side to his nature, and a deep love of his fellow men, which inspired much of his work as a doctor; he was more than a physician to his patients, he was their friend.

Colonel Groves had a particular fondness for children, and it is related that when the advancing Allied armies occupied any town or village, having attended to his military duties, he was next to be seen wandering down the streets distributing sweets to the children.

The Colonel's interest in children and their welfare led to the very considerable work that he undertook on behalf of St. Mary's Children's Home at Eastnor, which was formerly a Church of England Home for Waifs and Strays. There he made persistent efforts to bring about the closer integration of the Children's Home and the village.

A memorial fund has been opened which already totals £209. This is to be used to provide a hut where the older children can enjoy their hobbies without interference from the younger ones.

#### A Tribute to Sir Geoffrey Keynes

To celebrate his seventieth birthday, Sir Geoffrey Keynes' friends and colleagues at St. Bartholomew's Hospital and the Osler Club held two meetings, where tribute was paid to his many-sided genius. These tributes together with the minutes of the Osler Club meeting and a complete bibliography of Sir Geoffrey's writings, have now been collected and are to be printed for the Osler Club. The book will contain the speech made by Sir Russell Brain in the Great Hall of St. Bartholomew's Hospital, with the tributes which were then presented to Sir Geoffrey in the form of a privately printed leaflet, and the speeches made by the President and Sir Gordon Gordon-Taylor at the Osler Club meeting. The Librarian of the Royal College of Surgeons, Mr. W. R. Le Fanu, has prepared the bibliography, which lists all Sir Geoffrey's books and articles in periodicals, medical and literary, arranged in chronological order under subject-headings. The book will be illustrated with a portrait of Sir Geoffrey and a facsimile of the manuscript of his *Religio Bibliographici*, and will be bound in half-cloth with decorated paper boards; the price will be 15s.

The book will be distributed by Messrs. Rupert Hart-Davis Ltd., 36 Soho Square, London, W.1, and those wishing to subscribe to the volume should communicate with them before June 30th. A full list of subscribers will be printed in the volume.

#### Sir Joseph Henry Pierre

A recent issue of *Spotlight*, a monthly newsmagazine published in the Caribbean area, carries a feature account of the life and work of Sir Joseph Henry Pierre.

Sir Henry was born on October 28th, 1904, in a settlement some fifteen miles from Port of Spain. His father, the Hon. C. Henry Pierre, was a highly popular member of the City and Legislative Councils.

At an early age, young Henry became interested, through the good offices of the family doctor, in how medical men went about their work and, from this, his interest developed naturally to the very substance of medicine.



After completing his secondary education at Queen's Royal College, Henry Pierre came to Bart's, where he fell under the influence of Sir Girling Ball, who was then Dean of the Medical College. At Bart's he also met a group of young men who worked hard and played hard, and this, says *Spotlight*, is still one of the most notable features of his way of life today.

Having qualified, Henry Pierre turned down offers of work in this country in order to return to Trinidad and the type of practice which over here was contemptuously termed "colonial medicine." It was a name he hated, and he burned with a desire to bring West Indian medicine up to world standard. His twenty-four year progress from a junior appointment to a knighthood in 1957 and an Honorary Fellowship of the Royal College of Surgeons, has been studded with pioneer operations in all fields of surgery, but especially in chest surgery. His ambition to remove the "colonial" handle from West Indian surgery has been achieved for all time through his skill, personality and capacity for almost non-stop work.

#### Hospitals' Symphony Orchestra

The concert on April 1st was attended by rather fewer people than usual, and it is certainly true to say that those who were not there missed a most enjoyable evening. The major work performed was Beethoven's 6th Symphony, which was probably aiming rather high, and the result was very mixed: there were times when the second violins hardly seemed to have the stamina to maintain pages of semi-quavers, and tension rose as the uncertainty increased. On the other hand, the *tutti* were almost always excellent, the intonation of the orchestra good, and the playing controlled and sensitive.

The outstanding performance of the evening was unquestionably Holst's Ballet Music from "The Perfect Fool." Although at times of considerable technical difficulty, the orchestra clearly enjoyed itself and succeeded in overcoming the effort of invoking the Spirits of Earth, Water and Fire, while the audience found themselves relaxed and at ease, yet certainly moved by this work.

The Trumpet Concerto of Haydn (played by Philip Jones) was delightful and played with an ease and confidence which further emphasises the fact that both orchestra and

audience enjoy a work which they can master readily much more than one which is stifled with numerous technical difficulties. Rossini's Overture to *Simiramide* was rather shaky—but one must make an allowance for the first work of the evening. Christopher Finzi, the conductor, should be congratulated on the standard of this concert. Talent from Bart's is responsible for seven and a half per cent of the orchestra strength!

P.J.W.

#### "Great Expectations"

This is the third time in as many months that the Mermaid Theatre has attempted to "bring the classics to the masses." In "Great Expectations" they have a play which, although at times is slow, holds the attention throughout, for so skilful is the production that at the very moment one begins to drift, a twist of humour is introduced and the mind is back to the play.

Again clever lighting and a simple but functional set give atmosphere to a play set in early Victorian times. With little imagination you find yourself on the marshes, remote and desolate, only to find, minutes later, that you are in the heart of London; and with all this to help them an excellent cast fit themselves into character extremely well.

With what many of us found in our youth to be a long and tedious book, the Mermaid has produced in "Great Expectations" an adaptation which should appeal even to those who are sceptical of Dickens being "potted."

From now on I'll prefer it that way.

J.W.

#### Drugs are Not Enough

Addressing the Congress of the Royal Society of Health, Dr. C. A. H. Watts, of the Standing Health Advisory Committee, said that drugs alone are not enough in the treatment of a patient's disease. The patient needs and relies upon the personality of his doctor.

"Never in the history of medicine has the family doctor had such useful weapons with which to fight disease and suffering. But," Dr. Watts went on, "our prestige is not nearly so high. Our status has fallen because we have been misled by the power of our new tools . . . . We have largely forgotten and ignored the ancient sources of our power. Besides the drug, the patient needs the personality of the doctor behind it."

Commenting on the need for a wider understanding of the psychiatric aspects of medicine, Dr. Watts said, "Progress in general medicine must go on side by side with progress in the understanding of human behaviour. The doctor who studies his patient's fears and phobias not only helps the patient, but he also enriches his own clinical acumen."

### Rheumatism

It has been announced that the Empire Rheumatism Council is to finance an investigation into the effects of rheumatism on industrial workers and their output. It is estimated that 27 million working days per year are lost to the nation through the effects of rheumatic disease.

The investigation, which will be directed by Dr. J. J. R. Duthie, Director of the Rheumatic Unit at Edinburgh, will seek to gain a more accurate picture of the incidence of rheumatic complaints in specific industries. The survey will estimate the financial implications of rheumatic disease, both for sufferer and employer, and will seek to elucidate the importance of working conditions in aggravating rheumatic disorders.

In the light of its findings, it is hoped that it may be possible to advise employees of ways in which the incidence of such diseases may be reduced, and to designate occupations suitable for workers already partially disabled by rheumatism.

### News in Brief

The Revd. D. Neill, M.A., who was a student at Bart's from 1928-1930 has recently been appointed Chaplain-General to H.M. Forces.

Dr. C. F. Harris has been appointed for a further year as Vice-Chancellor of the University of London.

Mr. G. J. Hadfield has been appointed Surgeon to the Aylesbury Group of Hospitals.

Mr. E. A. J. Alment has been appointed consultant obstetrician and gynaecologist to the Northampton and Kettering Group of Hospitals.

Mr. I. McColl has been appointed Junior Registrar to the Surgical Professorial Unit as from May 1st, 1960.

Mr. P. Bliss has been appointed Junior Registrar to Mr. Hosford's Firm as from May 1st, 1960.

Dr. C. S. Nicol appeared in the I.T.V. programme "The Shadow of Ignorance" on March 30th. The programme, introduced by Jo Grimond, discussed some of the medical and social problems encountered in venereology and called attention to the current increase in the incidence of venereal disease. This programme was a fine example of the proper use of television as a medium for educating the public in medical problems. The factual presentation can have done nothing but good, and the over-dramatisation of hospital practice, which is such a conspicuous feature of another weekly programme, was scrupulously avoided.

Dr. A. K. Thould was successful in the University of London examination for the degree of M.D. held in April.

The Soccer Club Dinner will be held on Thursday, June 16th, at the Talbot Restaurant, London Wall. Mr. Alan Hunt will preside. Any past members of the Club who would like to attend are asked to write to the Hon. Secretary, B. D. Hore, College Hall, Charter-House Square, E.C.1. The cost of the dinner is 15s.

### Suture Packs

The use of catgut tube breakers has been rendered unnecessary by a new type of package introduced by Ethicon Limited, of Edinburgh. Sutures are now available in five-foot lengths in aluminium foil packs. These packs are readily torn open leaving the suture ready for use, and the risk of damage to gloves or suture from broken glass is obviated.

The packs are presented in a jar of disinfecting fluid containing formalin. This preserves the packs in antiseptic conditions and, it is claimed, ensures their complete sterilisation should they be returned to the jar unused after the operation.

### Fifty Years Ago

Thomas Horder read a paper to the Abernethian Society in 1910 on "Fever Without Other Physical Signs." He defines physical signs as those signs "which can be appreciated by the unaided senses of the observer. The author excludes from his heading 'cases in which there are physical signs but . . . signs inadequate for diagnosis.'" "The cases (of fever) may be divided into two groups according as the physical signs are latent or difficult to find or are altogether absent."

In the first group in which the physical

signs are overlooked or latent, Horder includes seven conditions. "*Cholecystitis*—the patients are usually the subjects of gall-stones . . . often they are stout . . . pain is generally present . . . flatulent distention of the bowels is almost constant. *Pyelocystitis*—the amount of pus in the urine may be quite small . . . the commonest micro-organism at work is *B. coli*. *Pyorrhoea alveolaris*—long-continued and marked pyrexia may certainly own no other cause than oral sepsis. The form of fever is apt to be periodic, with intermissions lasting from one to several days. *Perigastritis and subphrenic abscess*—when signs do appear, pleural friction is apt to be the first. *Acute rheumatism*—may give rise to bouts of fever with little or nothing manifest in the way of physical signs . . . sodium salicylate may have no effect upon the fever. It is highly probable that some serous membrane is in a state of smouldering inflammation. *Localised tuberculosis*—is probably the commonest cause of fever with latent physical signs. *Fever following surgical operation*—A physician is not infrequently called upon to discover the cause of pyrexia arising in a patient shortly after an operation has been performed. Painful experience has at length taught the modern surgeon to treat with due respect the subtle possibilities of the pyogenic coccus. But might he not now with advantage turn his attention to greater care for the integrity of the tissues through which he passes during the steps of his operation? That is to say might he not be repaid for showing more respect to the soil, as he has been repaid for showing more respect to the microbe?"

In the second group, entirely lacking physical signs, ten conditions are included. "*Influenza*—is probably the commonest cause of pyrexia without other physical signs. Indeed, most cases of influenza run their course without other signs than that recorded by the thermometer. *Typhoid fever*—is the most frequent and most important cause of fever of longer duration than five days in Great Britain, physical signs being absent. Neither a sudden form of onset, nor absence of headache, nor form of temperature chart must be allowed to interfere with a consideration of this infection as a possible cause of pyrexia. *Septicaemia*—especially following the puerperium may lead to marked fever without other signs. The presence of a bone injury in a child suffering from sudden

fever must always receive the most critical examination. *Malta fever*—the patient may come under observation for general weakness, for neuralgic joint pain or for fever . . . the most careful clinical examination may fail to demonstrate any possible focus. *Malaria*—the diagnosis rests upon the discovery of the parasite in the blood . . . a leucopenia ("relative lymphocytosis") is almost invariable. *Cerebro-spinal fever*—occasionally there may be an absence of the diagnostic clinical signs for some days or even weeks. *General tuberculosis*—a rare cause of fever in patients who show no other physical signs of disease. *Intestinal intoxication*—obscure fever which seems to depend for its cause upon the absorption of poisons generated in the intestine. *Rat-bite fever*—there is a disease having the following characters: The patient is bitten by a rat. After an incubation period of three to four weeks fever appears, accompanied by an erythema and much constitutional disturbance. A high leucocytosis is present. *Nervous fever*—in a case of fever . . . the question of nervous influence must be considered."

Although the author has "only dealt with matters of personal experience" and this paper was read fifty years ago, a more recent classification could differ little from this list which Horder prepared for the Abernethian Society.

#### Six of One, Half a Dozen of the Other

Queen Farah of Persia is expecting a baby, and everything possible is being done to ensure the birth of an heir to the Peacock Throne. An Associated Press message quotes a royal court source as saying that the queen is following a careful regimen. "This regimen was advised by experienced specialists, and is believed to give at least a 50 per cent assurance for the birth of a boy"!

#### MR. NASH AT BLACK SEA RESORT

—The Guardian

#### Mr. Nash meets Kruhshev

—Daily Express

Well, well !

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**CALENDAR**


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**JUNE**

- Wed. 1—L.T.C. v Royal Free (A)  
 Sat. 4—On duty : Dr. R. Bodley Scott  
                             Mr. A. H. Hunt  
                             Mr. F. T. Evans  
                             Cricket v Queen's College, Cantab.  
                             (H)  
                             L.T.C. v King's College Hospital  
                             (H)  
                             Cricket Club Dance  
 Sun. 5—Cricket v Parkfield (H)  
 Wed. 8—L.T.C. v Royal Holloway (A)  
 Fri. 10—  
 Sat. 11—**OPEN DAYS**  
                             On duty : Dr. A. W. Spence  
   Mr. C. Naunton  
   Morgan  
   Mr. R. A. Bowen  
                             Cricket v Wimbledon (H)  
 Sun. 12—Cricket v Horlicks (A)  
 Wed. 15—L.T.C. v Westminster (H)  
 Thur. 16—Abernethian Society :  
                             Dr. Phillip Addison, M.R.C.S.,  
   L.R.C.P.  
 Sat. 18—On duty : Dr. G. W. Hayward  
                             Mr. A. W. Badenoch  
                             Mr. R. W. Ballantine  
                             Cricket v Charing Cross Hospital  
                             (A)  
                             Cricket Club Dance  
 Sun. 19—Cricket v O. Cholmondelyans  
                             Shooting : U.H. Championships  
 Mon. 20—Film Society : "Passport to  
   Pimlico"  
 Wed. 22—L.T.C. v St. Mary's Hospital (A)  
 Thur. 23—Abernethian Society :  
                             Sir Roy Cameron, F.R.S.  
 Sat. 25—On duty : Dr. E. R. Cullinan  
                             Mr. J. P. Hosford  
                             Mr. C. Langton Hewer  
                             Cricket v Jesters (H)  
 Sun. 26—Cricket v O. Roans (H)  
                             Shooting : Staff v Students  
   Hospital Championships  
 Wed. 29—L.T.C. v Bedford College (H)  
                             Henley Royal Regatta opens
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**ANNOUNCEMENTS**


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**Engagements**

**HADFIELD—SLEIGH.**—The engagement is announced between Geoffrey John Hadfield, F.R.C.S., and Beryl Sleigh. The marriage will take place at St. Bartholomew-the-Great on May 21st.

**SPENCER—BACON.**—The engagement is announced between Dr. A. George Spencer and Pamela Bacon.

**Births**

**ARDEN.**—On April 5th, at Cape Town, to Ann, wife of Surgeon Commander L. D. Arden, R.N., twins, a son and a daughter.

**BUNJE.**—On January 28th, to Elizabeth and Dr. Henry Bunje, a son (Richard Henry).

**CHURCH.**—On March 8th, to Rhoda, wife of Dr. John C. T. Church, a son (Jonathan Christian Martin).

**CLARKE—WILLIAMS.**—On March 15th, to Shirley, wife of Dr. Michael Clarke-Williams, a son (Jeremy), brother for Marion and Adam.

**GREY—TURNER.**—On March 20th, to Lilia, wife of Dr. Elston Grey-Turner, a daughter.

**HANS.**—On March 14th, to Nora Frances, wife of Stanley Hans, F.R.C.S., a daughter.

**RICE.**—On March 20th, to Brita, wife of Dr. N. S. C. Rice, a daughter (Karin Elisabeth), a sister for Andrew.

**ROBINS.**—On February 23rd, to Shirley and Robert Robins, a third child (James Edward).

**SKEGGS.**—On March 24th, to Anne and David Skeggs, a daughter.

**VERNEY.**—(Adoption.) By Dorothy and Dr. Geoffrey (Bob) Verney, a daughter (Nicola Jane), sister for Timothy.

**Deaths**

**COUCHMAN.**—On March 18th, Dr. Hugh John Couchman, aged 73. Qualified 1912.

**DICKIE.**—On March 20th, William Stewart Dickie, O.B.E., F.R.C.S., aged 87. Qualified 1900.

**ETHERINGTON-WILSON.**—On April 4th, William Etherington-Wilsons, F.R.C.S., aged 66. Qualified 1916.

**FORRESTER-WOOD.**—On April 6th, William Rodney Forrester-Wood, F.R.C.S. Qualified 1929.



## Radiology in the Investigation of Abdominal Tumours

by R. A. KEMP HARPER

Over the years, Radiology has become increasingly essential to the physician and surgeon in the investigation of abdominal disease, and is now a fundamental part of the investigation of abdominal tumours. It is seldom that a patient is operated on nowadays without an accurate pre-operative diagnosis having been made when a tumour mass is present, but if one examines the operation lists of 25 or more years ago, the word "laparotomy" was very frequently used. The credit for the improvement in diagnosis is largely due to the advances which have taken place in Radiology.

How does one set about investigating a mass found in the abdomen? As most radiologists do not see the patient before the clinician, consultation with the radiologist as to the best means of approach is valuable and often time-saving, whereas failure to do so may result in a blunderbuss attack by requests for a series of investigations, the sequence of which may not and often does not lead to the greatest economy in time and expense.

### *Gastro-Intestinal Tract*

Naturally, if the mass is thought to be in the gastro-intestinal tract, a barium meal for stomach examination, or a barium enema for colon examination, is essential, but it is not fully appreciated how necessary it is to have full preparation of the colon before x-ray examination and we frequently see how "a palpable mass in the colon" proves merely to be a hard scybalous mass which disappears with adequate preparation or during the post-evacuation phase of the barium enema examination.

The evidence of an intrinsic mass in the gastro-intestinal tract consists of narrowing of lumen, rigidity of the outline, often the presence of ulceration and sometimes a large intra-luminal mass. The presence or absence of peristalsis and mobility of the viscus is also important. Some tumours, however, mostly benign, arise deep to the mucosa and may only show a filling defect without ulceration. Then there are tumours which deform the gastro-intestinal tract but lie outside the

tract. Many of these displace and deform the tract by pressure in medial or lateral, anterior or posterior directions, or a combination of these. This applies mainly to retro-peritoneal tumours which are the most difficult to localise and especially to diagnose with accuracy.

A barium meal examination is usually successful in determining whether the mass is intragastric or lies outside the stomach. If it lies outside the stomach it often deforms the stomach by pressure and the site of the pressure defect and the direction of the deformity may indicate the position and often the origin of the mass. The origin may, however, on occasion, be very difficult to determine, as in the case of a patient with an actinomycotic mass deep to the anterior abdominal wall which deformed and was adherent to the anterior surface of the stomach.

Doubt sometimes arises as to whether a left upper abdominal mass arises from the stomach or spleen and in such a patient radiology very seldom fails to give an accurate diagnosis. In this type of patient a plain film of the upper abdomen can give the answer without further investigation, as the spleen can usually be identified and the outline seen clearly.

**Case 1.** W.B. Age 29. Male. Retro-peritoneal neurilemmoma.

### *Symptoms :*

Increasing size of abdomen for 2 years.

### *Clinical Findings :*

Mass in left abdomen. ? spleen.

### *Radiological Investigation :*

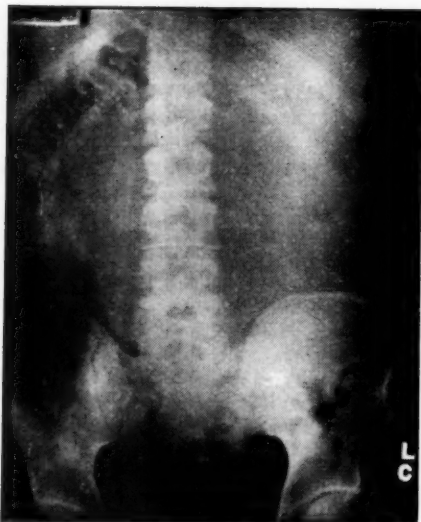
*Plain abdomen*—Spleen thought to be grossly enlarged.

*Barium Swallow*—No varices. Displacement of stomach to right.

*I.V.P.*—Left hydronephrosis due to displacement by "grossly enlarged spleen."

### *Operation Findings :*

18/10/57. Massive retroperitoneal tumour which had pushed left kidney down into the pelvis. Splayed out adrenal tissue at superior medial aspect of mass. Highly vascular. Spleen enlarged  $\times 2$ .



**Fig. 1. Case 1. W.B.**

*Uniform opacity on the left side of the abdomen which also extends into the right side, displacing all the bowel gas shadows on the right and towards the pelvis. Absence of psoas shadows. Exceedingly large retroperitoneal neurilemmoma.*

14/3/58. Removal of remainder of tumour.

**Pathology :**

Coarsely lobulated mass weighing 4,310 grms. "world's record" in neurilemmoma, arising in nerves adjacent to adrenal gland, which is closely adherent to capsule of tumour, but not involved.

**Comment :**

This illustrates the difficulty of differentiating the spleen from a retroperitoneal tumour in certain instances.

Difficulty arises only when the mass may be a splenic cyst or sarcoma in which case the outline is not typically spleniform or when the spleen is involved by a malignant tumour arising in the region of the suprarenal or tail of the pancreas. Most pancreatic masses deform the stomach on the posterior surface or deform the duodenum or sometimes both. A tumour in the body or tail of the pancreas tends to cause localised deformity of the posterior gastric surface and may actually invade it. A tumour in the head of the pancreas tends to deform and widen the duodenal loop and may also invade it. Sometimes the pyloric end of the stomach is also deformed by pressure and

we have seen two instances of pancreatic carcinoma invading and causing ulceration of the first part of the duodenum, the ulcers being malignant and not benign. Malignant ulceration of the first part of the duodenum is always due to invasion.

We have been fortunate to discover quite a number of tumours of the duodenum in various sites and of varied pathology by paying rather more attention to examining the duodenum in its whole length than may be the custom in the course of a barium meal examination. The tendency to neglect the duodenum distal to the first part and also the proximal jejunum arises from the pressure of work and time involved in carrying out vast numbers of barium meals which occupy such a large part of a radiologist's time. This applies to an even greater extent to radiologists working in non-teaching hospitals. In the department in this hospital there are approximately 75-80 gastro-intestinal examinations carried out each week. The work, therefore, has to be shared by all the radiologists to minimise the strain, both mental and visual, of working in the dark for long periods. It is seldom that tumours are found in the small intestine and examination of the small intestine which is tedious and time-consuming, should not be requested unless there seems to be a definite reason for doing so, such as diarrhoea, colic of an apparently small intestinal type, obscure abdominal masses, symptoms suggestive of regional enteritis and haemorrhage or iron-deficiency anaemia of obscure origin. Some masses cause displacement of coils of small intestine and retroperitoneal tumours may first be suspected by finding some displaced coils of jejunum or ileum. The extent of these tumours is often indicated by the degree and direction of displacement of such coils. Crohn's disease or regional ileitis often produces an inflammatory mass, and it can usually be located and defined by deformity of the ileum in the form of narrowing, rigidity, ulceration and often some degree of obstruction. In the earlier stage of the disease, irritability and a variable degree of narrowing may be seen without complete rigidity. The mass may also include several adherent and inflamed coils of intestine sometimes with fistulous communication between them, and these may be outlined by barium or a fistula between small and large intestine may be seen. An appendix abscess deforms the medial wall of the caecum and

often displaces loops of ileum, which may be adherent to the mass. A mass of glands in the ileo-caecal angle may also produce displacement and cause obstruction of the terminal ileum.

If a tumour or any type of pathological change is suspected in the colon, barium enema examination is the most satisfactory method, and is very much more accurate than waiting until barium outlines the colon after a barium meal. For the detection of any lesion the colon should be practically empty before the examination, and this is absolutely essential if small polypi are to be looked for. These are shown best after the patient has evacuated the barium and the colon has been redistended with air. The thin layer of barium remaining on the mucosa plus the contrast of air in the lumen shows up even quite small polypi in the colon.

Carcinoma and diverticulitis of the pelvic colon may be impossible to differentiate clinically, but the difference is obvious radiologically when the diverticula are outlined and the deformity of the lumen resulting from inflammatory changes is demonstrated. Difficulty only arises when carcinoma and diverticulitis co-exist. The mucosal pattern has to be carefully studied to see if it is still intact or whether it is ulcerated, as this commonly denotes the presence of carcinoma. In addition, a pericolic abscess may be diagnosed by the existence of a smooth pressure defect on one aspect of the colon in the region of the diverticulitis. Sometimes barium leaks from a diverticulum into an abscess or through a fistulous track into a loop of small intestine, the bladder or the vagina.

The pelvic colon may also be displaced by a mass arising in the pelvic cavity, most of which tumours are of uterine or adnexal origin. Much rarer tumours arise behind the peritoneum or from the bony wall of the pelvis, but these also frequently cause pressure deformity of the rectum or pelvic colon.

#### *Urinary Tract*

Plain films of the renal tract are essential to the exclusion of opaque calculi, but in addition the outlines of the kidneys are usually well seen and an opinion can be given regarding the shape, size and position of the kidneys. Enlargement of the whole renal outline usually denotes the presence of a marked degree of hydronephrosis or less commonly of a widely infiltrating renal

carcinoma or more rarely still of a kidney infiltrated with Hodgkin's disease or amyloid disease. The left kidney is often deformed by pressure from the spleen, but carcinoma or cyst mostly produce more localised deformity and also deformity of pelvis or calyces, or both, a feature which is not seen when the deformity is due to splenic pressure. A tumour may arise in the renal pelvis or ureter and cause gross hydronephrosis, which renders the kidney palpable. It may be very difficult in certain instances to differentiate a cyst from a carcinoma in the kidney, as each may produce local enlargement and smooth deformity of the calyces. In such a case, the injection of an opaque medium into the renal artery followed by serial x-ray films almost always shows the difference in the circulation and position of the blood vessels in the two conditions. There is usually an increased and very irregular vascular pattern in the pathological area when neoplasm is present and displaced and sparse vessels when a cyst is present.

The mass may, however, prove to be outside the kidney, in which case the kidney is frequently displaced. Renal displacement mostly in a distal direction, is caused especially by enlargement of the liver, spleen, pancreas, suprarenal and by retroperitoneal masses above the renal level. It is not generally realised that a huge spleen or tumour can displace a kidney into the opposite side of the abdomen and gross displacement often produces distortion of the renal pedicle with consequent interference with function and development of hydronephrosis.

It is important to differentiate between a renal and a suprarenal mass, and this can usually be done by studying the renal outline. Difficulty arises when the mass is adherent to the upper pole of the kidney and obscures the outline but, in general, the absence of deformity of the superior calyces of the kidney helps to exclude a renal tumour and, if doubt still exists, oxygen introduced into the perirenal space or opaque medium into the renal and suprarenal arteries, commonly enables differentiation to be made.

The ureters may be displaced by a tumour and several examples of this have been seen in patients with retroperitoneal masses.

The bladder also gives useful evidence of the presence of tumours, and intrinsic carcinomas are often shown by an irregular margin and a filling defect in the bladder

outline, but the commonest defect is that at the base of the bladder produced by an enlarged prostate. A film taken after mic-turition, when the bladder has been outlined by an opaque substance gives a satisfactory measure of the residue of urine which remains in the bladder in cases of obstruction. Sometimes the first indication of the existence of a fibroid of the uterus is pressure deformity of one side of the bladder fundus. Rather exceptionally a carcinoma of the bladder is diagnosed from a plain film of the urinary tract owing to the deposition of calcified debris on the surface of the bladder tumour, but confirmation by intravenous urography is usually essential. The only other condition likely to produce bladder calcification is Schistosomiasis which is so prevalent in Egypt, but seldom seen in this country. Calculi not uncommonly seen in the bladder present a different appearance. Tumours of the uterus or rectum may spread in the pelvic tissues so that the lower end of one or other ureter may be involved. Intravenous urography enables local extension of the tumour to this degree to be confirmed or excluded. If a tumour obstructs a ureter it may be necessary to examine the ureter or kidney by retrograde means, i.e., the passage of a catheter through a cystoscope into the ureter and thus outlining the ureter below the obstruction with an opaque medium, or the ureter, renal pelvis and calyces if the obstruction is incomplete.

Tumours which originate outside the biliary, gastro-intestinal or renal tracts are the most difficult to localise, and these are the tumours which may require multiple examinations before their origin can be determined. Examination of all these systems may be necessary before the site of the tumour is accurately located, and this is likely to be so with tumours in the right upper quadrant of the abdomen. Displacement of the gall bladder medially usually denotes a tumour arising from the liver or in the porta hepatis lateral to the gall bladder. Lateral displacement of the gall bladder but medial displacement of the duodenum can occur with a renal or suprarenal mass. Lateral displacement of the second part of the duodenum localises the tumour to the region of the head of the pancreas, and distal displacement of the third and fourth parts of the duodenum indicates a mass in front of or within the head or body of the pancreas. In a patient recently seen, most of

the features indicated a mass of pancreatic origin, but the third and fourth parts of the duodenum moved over the surface of the mass and could be made to lie on its upper surface. This tended to exclude a pancreatic lesion and the mass proved to be a retro-peritoneal sarcoma.

Retroperitoneal tumours can displace viscera in any direction except posteriorly, but an assessment of the features seen on urinary and gastro-intestinal examination can usually localise the mass fairly accurately.

**Case 2.** M.G. Age 58. Female. Retro-peritoneal Sarcoma.

*Symptoms :*

Left upper abdominal pain.

*Clinical Findings :*

Left hypochondrial mass.

*Radiological Investigation :*

**Barium Meal**—Calcification in left renal area. Enlarged kidney. Displacement of stomach to right.

**I.V.P.**—Large soft tissue mass in left abdomen. Left kidney functioning.

*Operation Findings :*

Retroperitoneal mass adherent to spleen, diaphragm, stomach and colon. Left kidney embedded in the mass.

*Pathology :*

Fibro-sarcoma well differentiated.

*Comment :*

Difficult differential diagnosis in view of poor renal function and outline, but the calcification seemed to extend beyond the limits usually found in a kidney with relatively normal calyces.

Careful scrutiny of the plain film is often of great value to the radiologist, not only in studying the renal and psoas outlines (one or both of which may be obscured by a retroperitoneal tumour) but also for the presence of odd flakes of calcification which may be found in a haemorrhagic or necrotizing tumour and for the presence of an area of increased translucency such as occurs in tumours containing an excess of adipose tissue, e.g. lipoma.

It is often helpful to carry out retro-peritoneal pneumography by injecting 1,000 ml. of oxygen or carbon dioxide behind the rectum and allowing it to ascend into the upper abdomen in the renal and suprarenal areas by which means the size of the tumour and its exact situation is usually ascertained. In these cases the gas always escapes in some degree into the mediastinum. This method is sometimes used in France and Italy to





**Fig. 2. Case 2. M.G.**

*Displacement of the stomach to the right. Deformity of the greater curvature by very large mass in the left side of the abdomen in which there is extensive calcification. Very large retroperitoneal fibro-sarcoma.*

produce a pneumo-medisatium in cases of mediastinal tumour.

**Case 3. R.L. Age 35. Male. Renal cyst.**

**Symptoms :**

Peripheral neuritis for six weeks.

**Clinical Findings :**

Mass in left side of abdomen. ? Spleen. Was seen by surgeon and queried as pancreatic cyst in view of previous history of trauma.

**Radiological Investigation :**

**Plain films**—Large mass obscuring kidney and spleen. Urography necessary.

**Urography-intravenous**—Marked proximal displacement of pelvis and calyces; mass almost certainly renal in origin—probably cyst. Right kidney normal.

**Barium Meal**—Stomach displaced to the right and anteriorly.

**Retroperitoneal Pneumography** (as surgeon still considered it to be pancreatic in origin)—Tomography and urography were also employed and confirmed the renal origin of the mass.

**Operation Findings :**

Cyst measuring 7 cms. in diameter removed from the lower pole of the left kidney.

**Post-Operative Intravenous Urography :**

Both kidneys normal.

**Comment :**

The diagnosis was apparent after intra-



**Fig. 3. Case 3. R.L.**

*Combined urography, retroperitoneal pneumography and tomography reveal a much enlarged left kidney, calyces displaced proximally. Enlarged renal outline is due to a very large cyst of the lower pole.*

venous urography but the clinician was swayed by the history of trauma to the left upper abdomen and required further persuasion.

In certain instances, if the tumour infiltrates widely the gas is prevented from extending in the area of infiltration and this is sufficient to indicate the invasive nature of the tumour and the extent to which it has spread. This method is also used to demonstrate the presence and size of para-aortic glands in Hodgkin's disease as such glands are not easily palpable unless they are of considerable size. The radiotherapist is also enabled to limit the field of radiation to the area of the mass. By this examination also, a mass associated with the kidney can be well demonstrated, and this procedure is very useful where cysts of the kidney may be attached to the kidney only by a pedicle.

In some countries in Scandinavia and on the Continent, air is at the same time introduced into the stomach and tomographic cross sections taken of the patient to show the relationships in transverse section. This procedure is clearly useful in the chest as well

as the abdomen and the installation of such x-ray equipment must be given serious consideration.

Lastly, the vascular supply in the region of the tumour can be outlined by introducing a catheter through a needle inserted into the femoral artery and by pushing the catheter as far up the aorta as the level of the tumour. The arterial system at this level is outlined by the injection of an opaque medium through the catheter so that the circulation may be seen on serial x-ray films. This serves to outline the normal and abnormal arterial supply and vascular pattern and enables the size and location of the tumour to be assessed. It is a very popular method of investigation in Sweden. In certain patients more extensive filling of the aorta with opaque medium is useful if there is doubt as to the origin of the tumour and occasionally the inferior vena cava has been similarly outlined by catheterising through the femoral vein.

How then does one plan an investigation of an abdominal tumour? If it is thought to arise from one of the tracts, the most likely tract should be examined first, but if both urinary and gastro-intestinal tracts are to be examined, as usually has to be done, especially

if the tumour is thought to be outside both, the urinary tract should be examined first as the plain film may give a lead to its location and thus to whether a barium meal or enema will be the next step. Also time is saved as it takes several days before barium can be completely eliminated, whereas a barium meal or enema can follow quickly after intravenous urography. Failing sufficient information from these examinations, the more specialised examinations, i.e. retroperitoneal pneumography and aortography or arteriography may have to be carried out in addition before the tumour is defined and some idea of its origin and nature discovered.

Thus radiology is essential and is often the most important method of examination in the discovery, location and assessment of the nature of an abdominal tumour. The precise histological nature of the tumour must naturally await the observation of a section under microscope.

It is only when the closest co-operation exists between the physician or surgeon and the radiologist that the fullest assistance from radiological investigation may be gained in the many difficult clinical problems which so often arise.

## LUMBAGO

When a man has got Lumbago  
He hopes to hell it may go,  
With mind and body on the rack,  
His thoughts are centred on his back,  
It has his sole attention.  
He uses language too perforce  
His dearest friends forgive of course,  
Though scarcely fit to mention.

Much sympathy he gets for sure  
From menfolks, maids and madams,  
But sympathy alas won't cure  
Or mitigate his spasms.  
A prisoner he is forced to be,  
The movies now he cannot see,  
He cannot to the play go,  
But in his bed must rest his head  
And feed on milk and sago.

"God bless you merry gentlemen, may  
nothing you dismay":  
This used to be a greeting in the olden time  
of day.  
I would suggest that it were best to alter this  
and say,  
My blessings on you gentlemen as through the  
world you go  
May all the Gods and all the Saints protect  
you from Lumbago.

J.P.J.

*This poem was sent in by a correspondent to whom it was given by an octogenarian patient.*

## The Pathologist and the Patient\*

by PROFESSOR J. W. S. BLACKLOCK

With the advances in scientific knowledge, due to the discovery of new technical methods in all branches of science, including Medicine, more and more reliance has been placed on scientific methods in the diagnosis, prognosis and the treatment of disease, and less on clinical impression and experience. Some long-cherished clinical beliefs have been rudely shattered as the result of laboratory tests and experiment. The pathologist is no longer just master of the dead-house, but is now a specialised clinician who must have a wide knowledge of disease and its treatment. He is no hand-maiden and has an ever-increasing interest in the patient. In any well-ordered hospital, consultation between physicians, surgeons and pathologists results in benefit for all concerned. When I was a young pathologist it used to be said with some truth that the physicians knew everything but did nothing, the surgeons knew nothing but did everything, and the pathologists knew everything, did everything, but all too late. But all this has changed.

### *Trends in Pathology*

For 40 years I have been associated, in one way or another, with Pathology in all its branches. At the beginning of this period, the pathologist was almost completely divorced from the patient, except for the occasional examination of a swab or a blood examination. His principal duty was to conduct the autopsy and reconstruct from observation of the ashes of the dead fire the cause of disease, and with his clinical colleagues to correlate the symptoms suffered by the patient with the morbid changes, much as Morgani had done in the late eighteenth century. Undoubtedly many valuable lessons were learnt, but it was too late to benefit the patient, though some still living may have profited. Morbid Anatomy and Histology was not the end: it was a step forward in the final discovery of the cause of disease and its cure. There is still a place for the clinico-pathological conference in the post-mortem room, and many a young physician or surgeon may yet learn a salutary lesson of his

errors in diagnosis and treatment. Even in this scientific age some patients die as a result of treatment and some for the lack of it.

But it is the early stages of disease that matter if cure or arrest is to be achieved. With the advent of Bacteriology and the marriage of Pathology with Physiology and Biochemistry early in this century, a great step forward had been made. No longer was Pathology a purely observational science. It was fast becoming experimental and clinical. The pathologist was out of his charnel-house and at the bedside of the patient. He was now able to correlate disturbed function during life with morbid change and to study the progress of disease and often help to direct its treatment. Our sole duty as medical men is no longer to alleviate the patient's symptoms but, as the result of scientific advances many of which have been discovered in the last decade by the experimental method in the laboratory, we have now the power to cure many diseases. In those early days many pathologists, like myself, apart from a sound clinical training, embarked on their career very inadequately equipped, particularly in the field of chemistry. The tests then in use were crude compared with the modern micro-analytical methods which have made so many advances possible. But it was a beginning, and the flood tide of advance led to further experiment and to the discovery of more scientific tests and thus the early signs of many a disease gradually became unravelled.

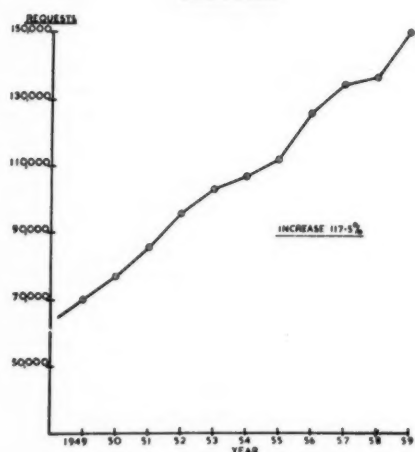
### *The Increase in Pathological Investigations*

The amount of pathological work at St. Bartholomew's is based on the number of requests made for laboratory examinations from the wards or out-patient department and, over 11 years (1949-59), there has been an increase from 69,134 to 150,505—117.5 per cent (Graph 1). The average number of pathological examinations, which, in 1949, was 6.2 per in-patient, showed a steady rise to 11.1 in 1959 (Table I). Thus, in 11 years, the pathologists have almost doubled their services to each in-patient. The same was found for the out-patients, though the average number of laboratory examinations per patient in their case was less.

\* A synopsis of a paper read at a Joint Meeting of the Sections of Medicine and of Pathology of the Royal Society of Medicine on February 2nd, 1960.

REQUESTS FOR PATHOLOGICAL WORK

1949—1959



Graph 1

In considering the increases in examinations over the same period in the different branches of Pathology, the mother-subject, Morbid Anatomy and Histology, will be taken first. Here the number of examinations has risen from 2,073 to 5,745—176.6 per cent—due to the taking of more biopsies, chiefly in relation to advances in radiotherapy, to liver and kidney punctures, to cyto-diagnosis and to an increase of about 10 per cent in major operations. The yearly number of autopsies has, however, remained much the same during the whole period (Graph 2).

PATHOLOGICAL WORK PER IN-PATIENT

1949—1959

YEAR	REQUESTS PER PATIENT	YEAR	REQUESTS PER PATIENT
1949	6.2	1955	8.9
50	6.2	56	9.1
51	6.7	57	10.2
52	7.6	58	10.1
53	8.2	59	11.1
54	8.1		

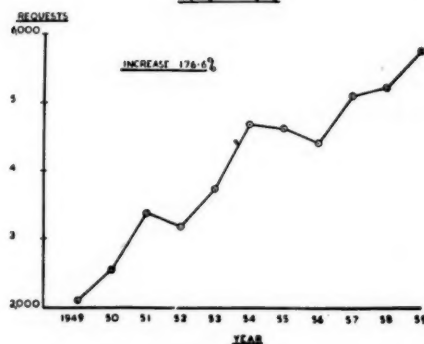
INCREASE

INPATIENTS - 20.2 %  
 OUTPATIENTS - 14.0 %  
 PATH WORK - 117.5 %

Table 1

MORBID ANATOMY

1949—1959

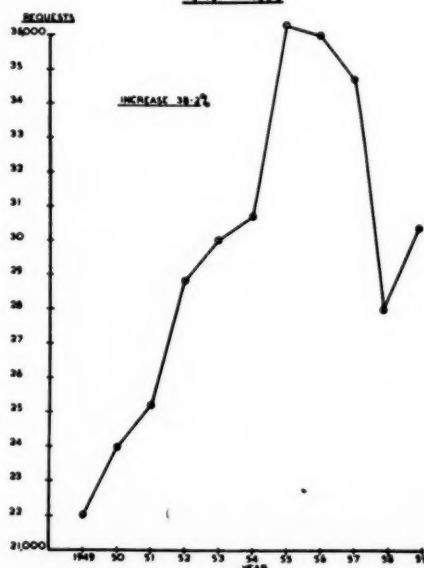


Graph 2

In Bacteriology there was a steady rise in examinations from 22,002 in 1949 to 36,379 in 1955—65.3 per cent—and thereafter a fall with a second increase in 1959 to 30,423—38.3 per cent—over the 1949 figure (Graph 3). Both increases have been largely due to

BACTERIOLOGY

1949—1959



Graph 3



requests for sensitivity tests in connection with antibiotic therapy. The first was also due to the extensive use of this therapy resulting in resistant strains which caused much cross-infection, necessitating a large number of bacteriological examinations. Once this had been overcome the number of investigations fell slightly.

In Chemical Pathology there has been a steady increase from 14,890 to 42,901—188.1 per cent—due to more requests for tests for hormonal dysfunction, electrolyte balance, liver function and insulin therapy (Graph 4).

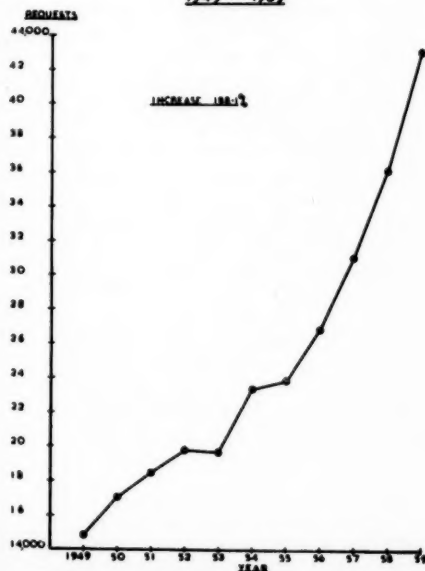
In Haematology there has been a rise from 30,169 to 71,436—136.8 per cent—due to more requests for tests connected with anti-coagulant therapy, blood transfusions and to the more recent therapies of the anaemias and the leukaemias (Graph 5).

#### *The Problems Involved in this Increase*

The greatest difficulty is the shortage of trained technicians. Indeed, most laboratories are working under their normal establishment of trained personnel, and have had to make good with young student technicians or technicians who have come from overseas for training for short periods.

#### CHEMICAL PATHOLOGY

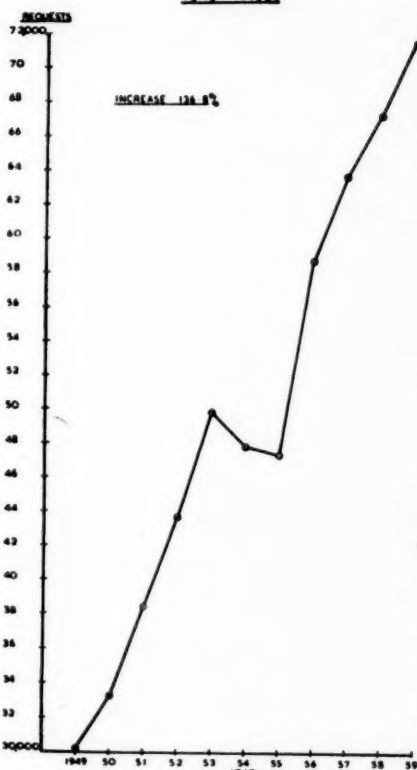
1949—1959



Graph 4

#### HAEMATOLOGY

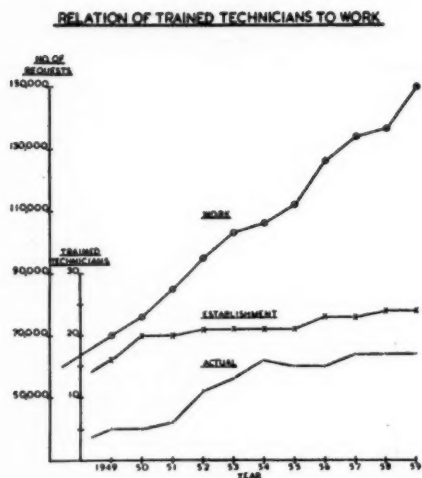
1949—1959



Graph 5

The relationship of trained technicians to the work over the years 1949 to 1959 in St. Bartholomew's is shown in Graph 6 which demonstrates that the increase of available trained technicians has not kept pace with the increase in the work. Indeed, we never have had our full establishment of trained technicians throughout this period, as they were just unobtainable. The main cause of this shortage, which is most serious, is the inadequate remuneration for technical staff and the shortage of suitable recruits who are attracted to industry where the financial awards and conditions of service are better than in the Health Service.

Many laboratories, too, are experiencing difficulties in recruiting suitable young medical graduates, due, I think, to the better chance of promotion in other spheres of Medicine. For the most part, however, this does not apply to the large teaching hospitals.



Graph 6

The staffing problem is fast resulting in the pathologist spending most of his time on routine work and less and less on research. The qualified staff in the Pathology Department at St. Bartholomew's was 17 in 1949 and 20 in 1959, an increase of 17.6 per cent. Yet, in these 11 years, the laboratory work directly connected with the patient had increased 117.5 per cent. To the present patient the pathologist does his duty by carrying out the tests requested, but with the ever-increasing load of routine work he has not the time for experimental work so necessary for the advance of his subject and which may result in benefit to future patients. In this physicians and surgeons could help materially by limiting their requests to examinations that are really necessary, particularly for the more complicated investigations. But even if this is successful, there is still a pressing need for an increase in academically qualified staff in Pathology.

With the rapid advance of the subject and the progressive increase in the volume of work, laboratory accommodation has become hopelessly inadequate and unsuitable. Indeed, in some places work is still being carried out in departments designed 40 to 50 years ago when Pathology was almost a

pure observational science. All too often the beds in a hospital or in a Region have increased, and the appropriate increase in staff and accommodation of the various ancillary services, including Pathology, have been completely neglected. This results in over-crowding in laboratories and unsatisfactory working conditions which the Factories' Act would not permit in industry.

#### *Results and Dangers of Increase in Laboratory Tests*

In the past Medicine was an art and a science, an art in that the clinician, whatever his speciality, learned at the bedside to diagnose, to relieve the suffering of and to understand his patient. Now Medicine has become more of a science than an art. It can be argued that the art of Medicine never cured anyone but it often did relieve physical suffering and gave peace to a troubled mind and so allowed the bodily defences to cure the disease or to adjust the physiological functions to compensate for the pathological changes.

This is a scientific decade, not of Chemistry, nor of Physics, but of Biology, when at last the cell, the final unit, is gradually yielding its secrets to our scientific probing. Thus our methods of investigating disease are bound to become more scientific and more complex. There is a real danger that the patient may come to be regarded as an interesting scientific specimen. Great clinicians of the past were all great humanists, who, without the patient being aware, could lift an anxious mind out of the rut into which it had fallen as a result of disease. The doctor-patient relationship now, as then, is still of paramount importance, and is the feature which has made British Medicine unique in this world. Do not let us sacrifice it on the altar of pure science. The patient is a human being with a personality and a soul and even in spite of all the scientific advances in Medicine, most patients still have an implicit trust in their doctors to alleviate their suffering, whether mental or physical, and to cure their diseases. Whatever our speciality we must not betray this trust in this age of rapid scientific advance.

## Influences on the Progress of Physiology in the Seventeenth Century

by B. D. HORE

The seventeenth century was one of considerable progress in the science of physiology. It was, as Franklin has stated, a century in which one feels as having stepped out of the ancient world of science into the modern. At the beginning of the century the Galenic view of the circulation was rigidly held; many physiological processes were explained in terms of spirits (these were a considerable time in dying), and little was known of the minute structure of the body. At the end of the century the way in which the blood circulated had been discovered; spirits had been largely replaced by physical processes and chemical reactions, and the histological structure of skeletal muscle and numerous organs, including the liver, kidney and spleen had been established. The factors which brought about these advances were fourfold. Firstly, the work of Harvey; besides his description of the circulation of the blood (perhaps the greatest single contribution made to science by any man), he gave men an idea of arriving at an understanding of physiological processes by the means of deducing hypotheses from anatomical structure and testing these hypotheses by carefully controlled experiments. Here we shall not consider his work any further as his contribution has been dealt with so often in numerous books and papers, and indeed has been described fully in past numbers of this journal. It is with the other factors that this paper is concerned. These were the introduction of physics and chemistry into physiological research, and the invention of the microscope.

### *The Influence of Physics on Physiological Research:*

The first of these influences we shall consider is that of physics. The work of Galileo and others early on in this century gave considerable impetus to the study of this subject, and during the seventeenth century physical ideas began to be used to explain the physiology of living organisms. The greatest contribution in this field was made by Giovanni Borelli (1608-1679). Primarily he was a mathematician and

physicist, but he used a knowledge of these subjects to explain the workings of the animal body. His work included expositions on the physiology of muscle, the mechanism of gastric digestion, the formation of urine, the workings of the circulatory system and the physiology of nerves.

In 1680 there was published the first, and in 1681 the second volume of his treatise on the movements of animals. The problems involved here, he divided into two groups. Firstly, the actual mechanical problems involved in these movements, and secondly the problems regarding the actual mechanism of muscular contraction. He attempted to solve the first group in a manner similar to that he had used in solving the problems concerning the workings of inanimate machines, calling to his aid mathematical figures and calculations. As regards the second problem, he was considerably helped by knowing some of the microscopic details of muscle, as these had been previously established by Stensen. From his work it became clear that each muscle fibre was made up of a group of fibrils. These fibrils were differentiated into a central portion and two terminal portions, the fibrils being bound together to form a fibre by means of transverse fibrils originating in the muscle sheath. Both Stensen and Borelli believed that during muscular contraction it was the central portion of the fibrils that actually contracted rather than the terminal portions which were joined to the tendon of the muscle. Stensen described the central and terminal portions of each fibre as being of different geometrical shapes and discussed at length the consequences of this arrangement. Borelli strove hard to reach a definite mechanical understanding of the processes of muscular contraction. He considered that during contraction the muscle increased in bulk (an idea which remained until the eighteenth century, when technical methods for measuring the volume of a muscle during contraction were available), and that the tension in a muscle when it contracts was due to two factors. Firstly some agency residing and passing down the nerves to the muscle, which acted upon the second factor, some



*Giovanni Borelli (1608-1679) From a lithograph by Vigneron. Impression in the Wellcome Historical Museum*

material in the fibres themselves, such that on the arrival of the nervous influence there occurred something resembling the chemical processes of fermentation or boiling. It was this process that caused the sudden inflation of the muscle to occur.

The physiology of gastric digestion during this century was explained in two different ways by two different schools. As we shall see later, the Iatrochemical school explained it largely as a process of fermentation, whilst the Borelli school considered it to be mainly a mechanical process in which the ingested food underwent a mechanical grinding by the movement of the stomach musculature. Into the stomach of turkeys, Borelli introduced glass balls and wooden cubes, and the next day on inspection of the stomach contents found that the balls had been pulverised and the cubes crushed. He was not satisfied with a qualitative approach and obtained quantitative figures for the force of this stomach contraction. By hanging weights on to a human jaw he was able to get an idea of the maximal force that the human jaw muscles were able to exert. He was aware that this force was not, or only just enough, to crack glass "vesicles" when introduced into the mouth. Introducing identical "vesicles" into a turkey's stomach resulted in them being crushed; he concluded, therefore, that the force of contraction of the turkey's stomach muscles to be not less than that of the human jaw (1,350 lb.). Although he

was the leader of the Iatromathematical school, unlike many of his pupils he believed that chemical processes played a part in gastric digestion for in some species, notably fishes, where the stomach was of a "membranous" nature, he stated that flesh and bones were digested by a corrosive fluid poured forth by small glands present in the stomach.

To the Borelli school the formation of urine was primarily a mechanical filtration of blood. Borelli was very much aware of the idea of membranes having pores of a certain size, and only allowing particles of a size smaller than this to pass through them. He envisaged the kidney as containing two kinds of orifices in the manner of sieves. One of these, the venous one, was of a suitable size to allow blood particles to pass through, whilst the other allowed water particles to pass but not blood particles. Borelli accepted Harvey's description of the circulation, but went further and mathematically worked out the force needed by the heart to propel blood through the body. His view on the nature of the steady flow of blood within the arteries is similar to that held today. He quite clearly understood that during systole the arteries were injected with blood from the heart; the entrance of this blood caused a stretching of the arterial wall, which resulted during diastole in a contraction of the arterial wall, expelling blood contained within it. His contribution to nervous physiology was not great, but it emphasises how he always approached physiological problems from a physical angle. He considered the nerves to be hollow tubes containing fluid. This fluid was subject to physical laws of flow and he developed theories as to the mechanical arrangements which determined this flow. He compared a nerve to a rod of Elder pith filled with fluid and so through the fluid capable of transmitting oscillations.

In this section we have not exhausted Borelli's contribution to physiological progress during his time, but we have seen some idea of his approach to physiology. It is worth noting that Borelli in his description of muscle contraction and gastric digestion called to his aid in explaining these processes the new science of chemistry. From this we can see he did not believe that all physiological problems could be solved by a physical approach as was believed later by many of his pupils.

*The Influence of Chemistry on  
Physiological Research :*

It was also during this century that the concept that chemical reactions were part of the normal physiological mechanisms of the body was developed. By the end of the century a school of thought akin to the Borelli school had developed. The views of this school, the Iatrochemical school, are discussed below.

The three great names of chemical physiology of this century were Van Helmont (1577-1644), Sylvius (1614-1672) and Stahl (1670-1734). Van Helmont has been called the father of chemical physiology. His views were a mixture of both rational and mystical thought. It was the former which principally aided physiological progress during this time. After studying the process of fermentation of grapes and hops he considered that some, at least of the physiological processes of the body, were dependent upon a similar mechanism. In all he considered that there were six fermentations in the body following food ingestion. Fermentation occurred in the stomach and duodenum and the chyle after entering the mesenteric veins was subjected to a third fermentation, whilst in these veins and in the adjacent liver and vena cava. This resulted in the chyle being converted into a crude form of blood. This crude blood was further purified by another fermentation in the heart and arteries, in which the crude blood became lighter and "volatile." He seems to be meaning here the change from venous to arterial blood, but did not clearly distinguish between this fermentation and the next. This next fermentation occurred in the left ventricle and endowed the blood with vital spirits. As will be realised from this description the Harveian doctrines had not made themselves fully felt in Van Helmont's mind. He taught that there was one more fermentation. Each tissue of the body, according to him, had its own store of ferments which acted on substances brought to that tissue by the blood, and so the nutrition of the tissue was maintained. These fermentative processes were the means by which a series of spirits governed the workings of the body. Here we note the mystical quality of his thought.

It is important to note that whilst he considered these fermentations to resemble those occurring outside the body, he did not consider that they were identical in nature. Sylvius, who succeeded Van Helmont as leader of this school, was familiar with many

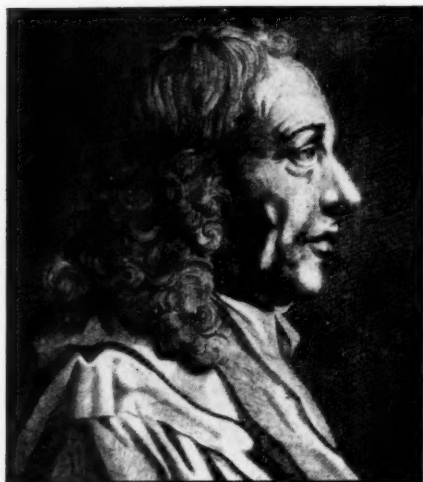
chemical processes. His expositions on physiology resembled generally that of Van Helmont, but differed from him in two important aspects. Firstly, he removed the idea of spirits from the scheme and, secondly, he considered there was no essential difference between vinous fermentation and the fermentation occurring in the body. He had studied chemical processes other than fermentation, and he thought that the solution to physiological problems lay entirely in a chemical approach. He thus made the mistake that the pupils of Borelli often made in considering that the new science (chemistry in his case) was the "answer to all ills." On the other hand, he made the positive contribution of removing spirits from Van Helmont's scheme, which aided the progress of physiology in the sense that many people had been sceptical of the work of Van Helmont and others because of their associated mystical quality. He also brought into recognition the fact that physiological problems were as much chemical problems as mechanical or physical. His confidence in his methods is illustrated by his theory of urine formation. He considered that prior to the secretion of urine the heart altered the blood in such a way as to render it suitable for the kidney to secrete. He thought, therefore, that it was the completion only of this secretory process which occurred in the kidney. He went on to state (and here I am quoting from Foster) "that although I cannot as yet fully follow out this process of urine secretion, nevertheless I hope to arrive at it by the process of precipitation!" The Borellian view on gastric digestion has been given. To Sylvius and his pupils this digestion was a process of fermentation; opinions differed as to what exactly was the cause of this fermentation, i.e., whether it was juice from the stomach itself or from another secretion such as the saliva.

The idea of an extra-corporeal agency in influencing living processes was revived by Stahl. He believed that although chemical processes carried out in the laboratory might seem similar to those occurring in the body, this was only a superficial resemblance; those occurring in the body being governed by a sensitive "soul." He stands forth at the end of this century as the founder of animism whose doctrines later lead on to the idea of a "vital principle" which maintained itself in men's minds through succeeding centuries.



*The Influence of the Microscope on Physiological Research :*

Undoubtedly the greatest single technical advance of this century was the invention of the compound microscope. The workers of previous centuries had proceeded considerably in their understanding of the anatomical structure of the body, but had always been limited by the small range of their visual sense. The microscope in this century in the hands of Malpighi and others, clarified the minute structure of several organs and allowed an understanding of the functions of these organs. Malpighi was a man of many talents. He made considerable contributions to embryology, botany and pathology, but it is with his contribution to histology and physiology that we shall deal here.



Marcell Malpighi (1628-1694). From the line engraving by Isabella Piccini after a medal of 1691 by Ferdinand de Saint - Urbain

Firstly, let us deal with his work on the lungs. Prior to this work, it had been considered that the lungs contained numerous spaces and into these spaces the blood from the pulmonary artery was poured, whence it passed into the pulmonary vein. Further the relation between the lung substance and the trachaea was not understood. In his observations on the frog's lungs Malpighi was able to show firstly that the final bifurcation of the trachaea ended in small air sacs deep within the lung substance, and secondly that the fine divisions of the pulmonary artery did

not end in spaces, but continued into very fine tubes which when traced were found to join the small branches of the pulmonary vein. This was the first description of the capillaries and the realisation that the circulation in the lungs was a closed one came into being. The fuller description of capillaries in numerous species by Anton van Leeuwenhoek established this as a general principle throughout the body tissues, and the missing link in Harvey's chain had been found. It will also be appreciated that with his description of a respiratory tree beginning at the trachaea, and going through smaller and smaller branches, and ending finally with the air sacs deep in the lung substance in close relation to the lung capillaries that Malpighi had laid the anatomical basis from which an understanding of the true nature of respiration could be made. This understanding was considerably aided by the use of other technical advances. Robert Boyle, in 1660, using an air pump was able to show that in a partial vacuum brought about by this pump, life could not continue for long and a flame was soon extinguished. In a complete vacuum these phenomena occurred earlier. This was perhaps the fundamental experiment on respiration, since it showed firstly that it was the entry of air into the lungs that was the prime function of respiration, and secondly that the change occurring in breathing was a similar process to that involved in the burning of a candle. At this time some people considered that the movement of the lungs in breathing was an essential part of the respiratory process.

Robert Hooke, in 1667, was able to show that the essential feature of respiration was the entry of fresh air into the lungs, whether this was brought about by normal lung movement or as in his experiment by artificially ventilating a stationary lung. In his experiment air was driven into the lungs by bellows joined to the trachaea and left through holes pricked in the lung substance. This technique of artificially ventilating the lungs was used by Richard Lower when, in 1669, he showed that in an open-chested animal undergoing artificial ventilation, the blood in the pulmonary vein was bright red, whilst that in the pulmonary artery was a much darker red. If the ventilation was stopped the blood in the pulmonary vein resembled that in the pulmonary artery. He further showed that blood drawn from the inferior vena cava, when circulated

through the lungs, became red in the pulmonary artery providing artificial ventilation was maintained. From these and similar experiments he concluded that this change in colour as blood went through the lungs was due to the uptake of air. It will be appreciated that the close anatomical relationship between the capillaries and the air sacs as described by Malpighi enabled scientists in this period to understand more clearly how this could occur.

It is perhaps for his work on the structure of the liver, spleen and kidney that Malpighi is most famous. Current views prior to his work on the liver and spleen were somewhat as follows—crude blood was carried to the liver via the portal vein, here some kind of fermentation occurred in which from the blood two impurities were removed, the lighter of these escaped as yellow bile into the biliary duct, the darker went to the spleen and from here was passed into the stomach to serve some useful but undefined purpose. The purified blood entered the vena cava and then the heart.

Malpighi through his careful microscopic observations of these two organs was able to get an insight into their function. He described the liver as being lobular in nature, the lobules being composed of glandular acini, and to each lobule there being carried numerous vessels, the branches of the bile duct, vena cava and portal vein. The glandular structure so resembled that of the pancreas and other known secretory glands that Malpighi considered that the liver was in fact a glandular organ, the product of the gland being the bile and its excretory duct being the bile duct. This was, as will be realised, a great step forward in understanding hepatic function. In his description of the spleen he described the muscle capsule, the trabeculae and splenic pulp and traced the course of the arteries and nerves through the organ. He is remembered today in his description of the lymphoid tissue surrounding the arteries, which still retain the name Malpighian bodies. From his understanding of the structure of the spleen he declared that it was a contractile vascular organ and likened it to the auricles.

Finally, we shall consider his description of the kidney. Bellini, a pupil of Borelli, had previously described the kidney as consisting of a series of tubules opening into the renal pelvis, and thought that the blood of the renal artery on entering the renal paren-

chyma passed through pores of a suitable configuration to enter the tubules and thus the renal pelvis. Malpighi took this description further, he described the kidney substance as being composed of pyramidal masses, these masses consisting of tubules and the tubules he observed opened into the renal pelvis at the apices of the pyramid. He also showed that at one end of the tubule, the end away from the apex of the pyramid, there was a knot of capillaries which were joined to branches of the renal artery. Little of fundamental importance was added to this description of the kidney until the work of Bowman in the nineteenth century. Malpighi, despite his genius, made some mistakes, e.g., he observed the red blood cells but thought them to be fat globules, and he described the grey matter of the central nervous system as being of a glandular nature. However, when we realise that little was added to this description of the liver, kidney and spleen for well over a century, and the importance of his work on the lungs, we realise how great a figure in the history of science this man was and how important the invention of the compound microscope.

In conclusion, it must be apparent that great progress in certain fields of physiology were made in this century, and this progress was largely brought about by the work of Harvey and the three influences we have considered here. We have seen that physics and chemistry, when used wisely, were a considerable help to the understanding of physiological processes, but were a hindrance to progress in the hands of those men who considered their particular science to provide the answer to all problems.

#### *Acknowledgment*

The author is indebted to Dr. D. A. McDonald for his advice regarding the preparation of this article.

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*Photographs by courtesy of the Wellcome Historical Museum*

## Two Poems

These two poems, submitted by Dr. Louis Rose, were written by a patient of his—a woman of 38, during a schizophrenically-coloured hypomanic episode—not her first. It is perhaps worth mentioning that there was very little alteration or correction of the original drafts. At the time she was having

moderate doses of Fentazin and, although electroplexy was considered, her response was good enough without it: (it had been necessary on a previous occasion.) The episode subsided within three weeks, and the patient is now well and looking after her home and children.

### TO TWO FRIENDS, 1960

He has much to give  
This old man with veins resting on his hands  
and forms blurring in his eyes.  
Now, in Spring, he sees only the budding  
Japonica.

He knows Self and his hope does not die.  
He knows the method and the diamond  
Moment.

He knows the Word but he is cautious.  
He is human and he knows to hold his  
Wisdom deep.

He listens only with his memories, well  
chosen, for he has tasted our foolishness  
and is tired of the repetition.

Can nothing be imparted ?  
Must we stand forever at the precipice ?

J.M.R.

### ODE TO THE E.C.T.

or

"PIN A ROSE ON YOU, JAY-BIRD"

It seems a pity  
It is a shame  
You can't speak words  
When you say my name.  
You must leave me in "quiet"  
Hope for the "best"  
Pray the sudden flash will do the rest.

Why, why am I feeling so "early-Eliotesque"?  
You can't quite answer.  
Is everyone thinking "It's all grotesque"?  
But yes, that Current will do its level best  
We'll have you down to earth again using  
your common sense.

It's done now, fine !  
You have had your time  
And so, Mr. Sweeney, continue once again.

JAY M.R.

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## Historical Diagnosis

FROM THE LIFE AND ADVENTURES

OF JOHN NICOL, MARINER

*Sent in by the late Philip Gosse*

We set sail for St. Helena, where we made a present to the Governor of a number of empty bottles; he, in return, gave us a present of potatoes, a valuable gift to us. While here, I and a number of the crew were nearly poisoned by eating albicores and bonettos. We split and hung them in the rigging to dry; the noon's rays have the

effect of making them poisonous. My face turned red, and swelled; but the others were far worse; their heads were swelled twice the ordinary size, but we all recovered.

In a few days we set sail for England, having circum-navigated the globe. We came into the river in the month of September, 1788.

## A Squared Circle

by RAY WINDSOR

Abernethy Ward

These are not the Halcyon days. The spring is too young, too green. In the Square there are clusters of soot-specked daffodils round the bare trees, whose arms are raised in comical embarrassment at their own nudity. The round-shouldered cherubs crouch under the fountain, making believe that their ridiculous indefatigability supports its grey-green weight. An endearing delusion which the rising fish ignore. The tableaux of students, anonymous in their white coats, come in between the newsreels of scurrying people in scurrying showers. When the sun is turned on they blossom untidily, occasionally narcissistically, frequently precariously, round the fountain's rim. And I am the visible invisible, the blind man on the corner selling matches B.C.—Before Christie.

The Square is austerely beautiful, an urban mandala symbol, but not completely enclosed. Within it the raw, soot laden wind of outside realities enters via the archway and side alleys to mingle with the inner realities. We are all very aware of inner realities here.

Perhaps this is why the gaiety of the students is subdued, for all its noise. They do not tick with the monotonous precision of the pure scientist, nor have they the desperate joy of the arts man, as self-consciously irrelevant as this year's Budget. They lack the gloomy sophistication of the quasi-social scientist, everlastingly defining life as a long illness with a fatal prognosis. I find them as refreshing, raw and shocking as the spring wind.

They swirl around me as I lie prone on my Stryker frame, augmented by a few nurses who have not quite forgotten that the Vivandière preceded Florence Nightingale in the history of their profession. And now the occasional houseman joins the melange . . . the blancmange pink of a Vicarage Club tie rents the air.

There is an earnest group of young men discussing Apartheid and its consequences. They are calm and moderate in their views. A demure nurse listens impassively, poised

on the brink of the fountain. Suddenly she rises from her pedestal with an expression of deep suffering. The conversation changes to a clinical exchange on haemorrhoids. I reflect with a finalist on life after death. The finalist is told not to be morbid; a mocking cry of "morbid" echoes through the crowd. The sun gets brassier and the maids come out, chattering to each other in continental English. Matron crosses the Square and a nurse whispers to me excitedly, "You have just seen a living legend."

"Sobranie tobacco is very good," says one student, puffing his pipe reflectively.

"The best I had was some flavoured with plum brandy . . . bought it in Cambridge," replies his companion.

"I say! How much does it cost to get your shoes repaired?"

"Try stick-a-soles, it's cheaper" (puff, puff).

"We've got a ward round this afternoon, our first on your old firm. What'll he ask us?"

"He'll catch you out on something simple you never bothered to check up on, like the composition of small-pox vaccine . . ."

"Made a complete fool of myself the other day. Tried to remove a large thoracic bruise with ether . . . thought it was flavin . . ."

"How are your SOPs?"

"As good as your MOPs."

"Well we do cure somebody occasionally . . . beginners luck I'm afraid."

"Man with three stab wounds in the Accident Box!"

The sun retires behind the clouds and I sense a Grey Imminence. A well-wisher hides my gallipot of fag ends in the fountain so I know, without interrupting my examination of Rufus, the fag-end eating fish, that the Dean has arrived and the hospital cat and I will be left to huddle together for warmth round a deserted fountain.

Off they all go . . . coats flying, notes flapping.

"Cheerio! Must go an' look at the meat!" Poor sons of rich men, com-

paratively rich, grant-earning sons of poor men. Cambridge and Shoreditch . . . but mainly Cambridge. The blasé, the nervous, the earnest, the flippant, the eager and the reluctant, the maculate and the immaculate.

At times they make me feel like an aged D.P. None of them want to reform the world in an excess of political zeal. They do not bowl religious arguments at each other and stonewall them the the retort "linguistic claptrap." They have neither the time nor the inclination to appreciate the ironies of their own situation, perhaps they think that to do so is a luxury.

I lie prone, being whilst they do and it is my job to interpret them. For me they represent yet another piece in a bewildering jigsaw, an important piece round which all the rest fits. The perils of the body and the perils of the soul are a basic human experience, men's ageless enemies. Their individual and social survival depend on their skill in combating them, their other activities are derivatives.

As I think this, the world's politicians,

philosophers and creative artists seem to me to be like the little cherubs, naïvely imitating Atlas under the fountain. It is all summed up so well by the Bart's crest. A nurse told me that it represents an equal chance of life or death. It is a contract which is made for all of us when we are born. It has never been so collectively true as it is today.

Do the student nurses and doctors who have come here for many different reasons, ever think, I wonder, that they have taken sides in the only battle which ultimately matters. It is fortunate that they are busy, too busy to think of all the implications of such an idea or they might run away and do something else for a living. These are not the Halcyon days.

It begins to rain and I hope there will be doughnuts for tea. They said the meat I had for lunch would be tender and it was about as tender as old boots. Soon they will come to take me back to the warmth of the ward where I have hibernated all winter. Perhaps they let me out too early. I diagnose my condition as spring on the brain.

## The Medicine Bottle

by G. FAGG

Many voices have been raised in condemnation of the bottle of medicine, of those who prescribe it, and of the patients who need such assistance for recovery. Economy being the order of the day, such voices are loudly applauded by the gods of Whitehall. May I, at peril of bringing down the wrath of these same gods upon my head, put in a plea for this humble form of treatment?

My first introduction to the art of dispensing came when acting as a locum for a country G.P. I was shown the "dispensary," a large bare room with bottles standing all over the rough wooden floor, by the doctor who was waiting to leave as soon as I arrived. The first surgery, and many subsequent ones were run on lines very different from those used by the doctor himself. He used to disappear into the vastness of his dispensary and emerge with the appropriate bottle for the patient to carry triumphantly away. This was impossible for me to do as I first needed assistance in deciphering the writing on the panel cards and then the mixing up was a

lengthy business. The only possible solution to the problem was to make up the bottles after the surgery and take them round the countryside on my daily rounds. At long last the art was mastered, the only error—an expensive one—being the making up of the mixtures according to the pharmacopoea. The patients remarked on the strength of the medicines, and the doctor on his return was dismayed at the quantities of valuable drugs which had been used.

Having, by my own efforts, overcome this deficiency in my training, I became an ardent devotee to the art of dispensing. Later, when in the Air Force, many happy hours were spent mixing my own concoctions, the worst tragedy being the explosion of a bottle and the smothering of my "best blue" with a syrupy mixture.

Thus was born an affection for the bottle which has stayed with me ever since, and may my critical scientific colleagues bear with me in such sentimentality. Anyway, if I were to admit that medicines were useless, then why



personal triumph in mastering the art of dispensing would be an empty victory, and a justification for this form of treatment is therefore necessary.

No physician can be a good physician until he has a reputation, and in paediatrics the bottle is the easiest way by far to its attainment. Also, it forms the essential part of the process known as "stealing the Lord's thunder." The orthopaedic surgeon has his wedged heels and night splints to perform the same process, and the dermatologist uses snow to cure naevi, which will surely disappear if left alone. The crux of the matter is that one must treat with something tangible, the conditions which are going to get better on their own. How often in the past has a mother returned to hospital to hear the results of investigations, only to enter the room with face wreathed in the smiles which tell that recovery has taken place. With pride I used to beam back at her but then to discover to my discomfiture that no treatment had been ordered. I could not, therefore, bask in the glory of success, the credit for recovery going to the next door neighbour who had recommended aspirin. Not so nowadays; the prescription is the vital part of the first interview, and only rarely does one find that the mother has failed to use it.

Next comes the case which is cured by one's advice, or maybe merely by entering the sacred precincts of the hospital. I remember a harassed mother bringing her healthy two-year-old daughter, complaining that she would not eat a thing. The mother related, with tears in her eyes, that the only square meal her daughter had had for months was when she settled down to eat the cat's meat with great relish off the kitchen floor. Advice, and very sound advice, was given, but alas no bottle. This child on return was completely cured, probably because she herself was listening to the advice. The mother was many degrees more sane and the father

also had recovered from his chronic pain in the knee. This was related to me by the mother, but no credit was given where it was due, either to myself or to the Lord. Rather, was she inclined to attribute the results to the supernatural.

Parents do not like admitting that their management has been faulty; they will accept advice and often act on it, but they like a back door through which to escape, rather than admitting the trouble was their own fault. What serves better than a bottle of medicine? Here is a simple and understandable reason for recovery and the fact that the doctor thought it was necessary confirms that they were right in suspecting that something was wrong!

"Do not fool your patients or you will eventually fool yourself." This is oft-proffered advice. Yet how often do the scientists fool themselves into thinking that it is what they put in the bottle and not the bottle itself which does the good. It is certainly advisable for the young practitioner to use drugs which have some demonstrable action, either on the bowels or some other organ. Perhaps later coloured water will do, and later still, when his reputation as a healer is well established, the laying on of hands will suffice. At present I use phenobarb. sol., with tinct. nux vom., the one to make sure that the other has no effect.

Finally, to propitiate the gods of Whitehall so wantonly roused to anger, may I put in a plea for cheap medicines. The expensive ones can better be replaced by advice. Brown bread is better than Beplex, exercise than evacuants, Horlicks than hypnotics, care than chloromycetin; and in the case of children M & F are far more important than M & B.

Make the medicine cheap and nasty for adults, and cheap but not too nasty for children. Remember, if it is not taken one cannot claim credit for the cure.

## Letters to the Editor

### HOUSE JOBS

Dear Sir,

In your March number you say the time spent in holding a first and second House job "often seems to be regarded as a year of pre-registration drudgery". I write hoping that some young man (or men) may either convincingly contradict you or, alternatively, explain this lamentable and astonishing state of affairs, for astonishing it must be to anyone of my own or earlier generations and to some at least of our successors.

To us 1919 and the early '20's do not seem all that long ago and in some respects history has played a repeat. In those years the survivors of the batch qualified in 1914-16 came back from service in Flanders, Gallipoli, Mesopotamia or the High Seas to pick up threads, become fit for civilian doctoring and, perhaps, work for a degree and we asked the hospital to help us. It did. It gave us House jobs and we were profoundly grateful. Our age was about 30; some of us had, rashly, married; some knew what they meant to do but others were mere adventurers, trusting that "a doctor need

never starve"; the N.I.H. capitation fee was, probably 9s. 6d. (possibly 11s.). Never, I think, has the practice of medicine seemed so enthralling as in those brief six months—for applicants were so many that we could not be given longer; life was uncomplicated and satisfying, we served the hospital and practised the Art; we felt like little gods and on pay at the rate of £60 a year we also felt rich. After all, our fathers had done the same job for no pay at all.

This is all plain truth, Sir; any Bart's man of my year will confirm it. What calamity has happened and why does no one cry out about it or attempt to put it right? £750 p.a. to "dispel the sense of injustice"! O tempora!

Yours faithfully,  
Lindsey W. Batten

*The Editor was thinking not of those lucky enough to get House jobs at Bart's but of the many less fortunate people who spend their preregistration year in the provinces.*

### ANAESTHESIA AT ST. BART'S

Dear Sir,

Until recently it has generally been supposed that chloroform was first administered by inhalation to a human-being for a surgical operation by Dr. (later Sir James) Young Simpson in Edinburgh early in November 1847 on the suggestion of David Wadie, a Liverpool chemist.

Dr. Stanley Sykes,\* a Leeds anaesthetist and a Bart's man, has delved into this question and has produced strong evidence to show that "chloric ether" (chloroform with spirits of wine) was first used as an inhalation anaesthetic at St. Bartholomew's Hospital by Mr. Holmes Coote on a patient of Mr. (later Sir William) Lawrence in the *Spring* of 1847. Actually this fact was suggested in Dr.

Barbara Duncum's admirable book "The Development of Inhalation Anaesthesia" published in 1947.

As a general rule the establishment of historical precedents is a profitless exercise but this event has proved to have such far reaching consequences that the truth as far as we know it should be appreciated more widely, especially amongst Bart's men "whom one can always tell, but not much".

Yours faithfully,  
C. Langton Hewer

\*Sykes, W. Stanley. "Essays on the first hundred years of Anaesthesia", 1960. E. & S. Livingstone.

### INACCURATE!

Dear Sir,

I am very distressed that our Sixth Floor ladies should think me so unrealistic, not to say naïve, as to associate them with the "notion of apathy". The occasion to which they refer was not of course the Council Meeting but the Annual General Meeting; some of them were presumably present and will recall that I did nothing but sing their praises.

It is even more distressing, however, to reflect that they do not seem fully to appreciate the delicate art of journalism which we find practised with such mastery in your monthly editions. Some of the principal and most delectable features of this

are the almost inextricable intermingling of report and comment (the case in point), a predilection for fantasy rather than fact (particularly in the September and October editions of last year), a taste for original syntax (does one "do" a loss, even of £150?), and a deliciously uninhibited approach to punctuation (of which there are three glaring examples in the January report).

These techniques, whilst adding greatly to the charm of our Journal, tend to exercise the gullibility of the reader.

Yours faithfully,  
David Julier

## Sports News

### VIEWPOINT

The season of winter sports is over, and the summer activities have now been in progress for some time.

It is now possible to sum up the statistical results of the Clubs concerned, and it can be said that they are hardly exciting. In fact, the Rugger Club has had one of its worse seasons for years. The Hockey Club's results are no better than last year, and the Soccer Club has no outstanding record. In fact, the only Hospital Club which has had a successful season is the Ladies' Hockey Club. For many years now, its record has been superb, and on the whole has been carrying all opposition before it. The United Hospitals' Cup has been won again this year; this cup has been won by Bart's for so many years now that one tends to take the fact for granted. But all credit must go to the ladies for the way in which they keep their standard so uniformly high.

It is too early to tell what sort of season the summer clubs will have. The Cricket Club has not lost many players since last season and, indeed, appears to have more talent than usual from the new intake. Perhaps it will be able to win the U.H. Cup this year, after its failure in the final last year. The Ladies' Tennis Club is holder of the U.H. Cup at present, and will no doubt do their utmost to retain it. In fact, let's face it, the women have the men beaten at sport.

### RUGGER

#### 1st XV v. O. Paulines (A) Saturday February 13th.

The conditions on this very wet February morning were far from ideal for playing rugby, and throughout the game neither side ever mastered the greasy ball. Play was even for the early part of the game, but a very bad offside mistake by one of the Bart's forwards gave the Paulines a 3-0 lead at the interval. In the second half the Bart's forwards pressed very strongly and some good running by the centres nearly produced scores on several occasions. However, the Paulines defended steadily and the game ended 3-0 for the opposition.

**Team:** P. Niven, J. Stevens, C. Frears, A. Letchworth, S. Harris, J. Bamford, I. Peek, J. Harvey, M. Jennings, A. Knox, J. Pennington, M. Orr, P. Moynagh, R. Jones, G. Halls.

#### 1st XV v. Saracens, at Chislehurst, Saturday February 20th.

On a sunny day, with the ground in beautiful condition, the heavier Saracens side playing very open football were soon on the attack. Their first score came from a well-manoeuvred pushover beneath the posts. The Hospital were always on the defensive after this, but they could not prevent the Saracens from scoring two further tries and a penalty goal. At the interval the opposition had built up a 14 points lead. From the kick-off in the second half the Bart's team began to attack a little more often, and Pennington reduced the arrears with two very good penalties so making the score 14-6. Almost immediately Stevens following up a long kick scored a try in the corner. For a short time it looked as if Bart's might well save the game, but a very good Saracens movement led to another goal and the game ended Saracens 19, Bart's 9.

**Team:** P. Niven, J. Stevens, J. Bamford, A. Letchworth, S. Harris, R. R. Davies, I. Peek, J. Harvey, M. Jennings, A. Knox, J. Pennington, M. Orr, D. Goodall, P. Moynagh, G. Halls.

#### 1st XV v. Treorchy (A). Saturday, February 27th.

On a fine sunny day, but with the pitch very wet from heavy rain on the previous day, Bart's kicked off and were soon attacking in the Treorchy 25. The backs handled and ran well with the ball, but could never quite create a sufficient opening for a try. The heavier Treorchy forwards after a slow start gradually pushed the Hospital on to the defensive, and from a five-yard scrum, scored a good try from a blind side movement. The try was duly converted and the teams changed over, Bart's 0, Treorchy 5.

In the second half Bart's played very good open football, and several times were all but over the line for a score, but the Treorchy defence was too strong. Towards the close of the game, following some very slack tackling, Treorchy scored another goal, making the final score Bart's 0, Treorchy 10.

**Team:** P. Niven, J. Stevens, J. Bamford, A. Letchworth, N. Burbridge, R. R. Davies, A. P. Ross, B. O. Thomas, M. Revill, A. Knox, R. Jones, M. Orr, H. Jones, D. Richards, D. Goodall.

#### 1st XV v. Aldershot Services, at Chislehurst, Saturday, March 12th.

The hospital started the game as usual on the defensive, and the large Services pack soon forced play into the Bart's 25. However, it was soon found that the Aldershot weaknesses lay in their backs, and the Bart's three-quarters took play into their opponents half. J. Bamford made a fine run to score under the posts, with J. Stevens converting. The Bart's forwards were winning the ball from the line outs and from the tight lead and the first half ended with the Hospital attacking strongly.

In the second half the handling by Bart's was even more impressive and Burbridge on the left wing got very close to the line on several occasions, and finally, after a very good threequarter movement, he scored in the corner, the try was unconverted. From the kick-off the Bart's forwards im-

mediately ran through the defence with a very good passing movement and P. Moynagh was well up to take the final pass for a good try which Stevens duly converted. The Aldershot defence had no answer to the open Hospital play and two more tries resulted from Letchworth and Burbridge, the extra points being added to one by Stevens. The game ended with a good win for the Hospital 21-0.

#### 1st XV v. Streatham, Saturday, March 19th.

After the fine performance of the previous week this game was a disappointment. With only 14 men Bart's were early on the defensive and after about 15 minutes were 3 points down as a result of a good Streatham try. Whilst scoring this try the Hospital's lock forward R. Jones sustained a knee injury so reducing the pack to 6 men. The Bart's side fell back completely on the defensive and Streatham scored three more tries and a penalty goal and at half time were leading 17-0.

At this point the missing member of the Bart's side appeared, and the play became somewhat more vigorous. The Hospital were now holding their own, but towards the end of the game were having some difficulty in maintaining the pace, and it was through this that Streatham scored a final goal.

#### 1st XV v. Harlequin Wanderers, Saturday, March 26th.

On a day that was ideal for good open rugby, Bart's started very well indeed, and were soon 3 points ahead from a penalty by J. Pennington. The Harlequins soon recovered, and their very much heavier forwards brought the play into the Bart's half and went ahead with a very nice try which was converted. From the kick-off the Harlequins mounted a strong attack, and were now showing complete supremacy in all departments over the Hospital side. Just before half time they scored an unconverted try and the teams changed over Bart's 3 Harlequins 8.

In the second half Bart's opened the game up more, and began to press the opposition into numerous mistakes, but full advantage was not taken of them and no score resulted. The Harlequins still playing some quite attractive football scored 3 more unconverted tries, but Bart's were not deterred, and just before time Bamford ran right through the defence to score a very good try. The final result was Bart's 6 Harlequins 17.

### INTER-FIRM SEVENS

The annual Seven-a-Side competition was held at Chislehurst on Saturday, 2nd April, and with a very good entry from both the Pre-clinical and Clinical sides, together with unusually fine weather, the whole afternoon was a great success.

As in past years three types of sevens team could be recognised, one made up of 7 rugby players,

another made of seven non-rugby players, and a third a mixture of the two. However, whatever the constitution of the team some very good sevens play was seen during the afternoon.

In the first round the only upset to expected form was the defeat of the second time Clerks I by the Mops and Sops who, however, were quickly disposed of in the second round by a very strong first time Clerks team, who subsequently reached the final.

In the second semi-final the second year Pre-clinicals reached the final by beating the Finalists.

Before the final the annual demonstration match between the Housemen and Registrars took place. Some very fine, and some very unusual rugby was seen, and after some 20 to 30 minutes play the match ended with a win for the housemen by some unknown score.

In the final of the sevens tournament the second year Pre-clinicals who had had the more difficult run to the final were beaten by a very proficient first time Clerks team.

In the evening an enjoyable dance was held in the pavilion.

### SOCCER CLUB

The Soccer Club has had a poor season winning only 4 of its 30 matches, while 4 others were drawn. In the United Hospital League we didn't win a match, but 2 were drawn and 3 matches were cancelled. We went out to University College Hospital in the first round of the Hospital's cup and reached the second round of the AFA Junior cup. The Oxford and Cambridge tours were successful apart from the football, the hospitality shown us in both towns being a feature of the season. Lack of new blood and a certain apathy among regular members necessitated frequent changes in the team throughout the season and probably explains the poor results. With more training around a nucleus of keen players next season we hope to obtain better results.

### LADIES' SQUASH CLUB

This season the Ladies' Squash Club has sprung into existence. It has, so far, been entirely unconstitutional, unofficial and unsubsidised, but nevertheless very active. We have played ten matches, against the Royal Free, the London, St. Mary's, Guys, Middlesex and Kings College Hospitals. We refrain from boring readers with details of our defeats, but we did finish the season by winning a return match against Guys, which restored morale. The standard of play improved as the season wore on and we are looking forward to more frequent successes next year. The following people have played for the team.

P. Aldis, J. Clarke, S. Cotton, J. Hartley, D. Layton, T. Lopez, V. Nash, K. Robinson, J. Sutcliffe, J. Sykes, A. Vartan, S. Whitaker (Capt.).

## Book Reviews

**ISOTOPIC TRACERS** by G. E. Francis, W. Mulligan and A. Wormall. Published by the Athlone Press, 1959. Second edition. Pp. 524. Price 52s. 6d.

The second edition of this book is considerably larger than the original and, in printing and binding, it would compare favourably with any transatlantic publication. The original aim of the authors was to explain the basic principles and techniques in the use of isotopic tracers in a way that could be easily understood by advanced students of medicine and biology who had no previous experience in the field. In the five years since the original edition was produced many fundamental advances have been made and the present edition contains descriptions of recent scintillation and gas-counting techniques and radio-autography. The chapter on the hazards and precautions in the use of radio-isotopes has been revised. The second part of the book contains the details of representative experiments employed in the special course in isotopic techniques run by the Medical College of this Hospital. The additional information has not at all interfered with the clarity of the presentation, and this book will be of value to established workers in the field as well as an introduction for students.

J.C.C.

**NOTABLE NAMES IN MEDICINE AND SURGERY** by Hamilton Bailey and W. J. Bishop. Published by H. K. Lewis & Co. Ltd. Third edition. Price £1 15s.

The third edition of this book has been revised and reset in a more readable type on better paper of more pleasing format (the previous edition of 1946 having been hampered by wartime restrictions). It is now a book which is aesthetically most satisfying. According to the policy of the authors, eponyms which have become more fashionable have been added, while others now less familiar have been rejected. De Graaf, Corrigan, Gram, Babinski and Reiter are a few of the twelve new names included, while Fowler, Unna and Böhler are some of the fourteen which have been omitted. It is difficult to know where the line should be drawn, and one awaits with interest the publication of "More Notable Names in Medicine and Surgery," which is in preparation. Names such as Crohn, Kernig and Fröhlich spring to mind as possible candidates for inclusion.

The inclusion of footnotes giving a description of almost every name which appears in the book is according to the tradition of some of the other books of Hamilton Bailey, and is most welcome. The comments are brief and very much to the point, for example:—

Caleb Hillier Parry, 1755-1822. M.D. Edin., F.R.S. Physician, the General Hospital, Bath. In addition to describing Hirschsprung's disease before Hirschsprung, Parry described Graves' disease before Graves.

or:—

Tobias Smollett, 1721-1771. British novelist whose main themes are the depiction of wandering rogues and low life in London.

Almost seven pages of biographies for further reading have been added towards the end of the book, and are a welcome addition. Some of the pictures are new and improved; if a comment is to be made

on the illustrations it is that it would be interesting to know the origin of some of the older prints. The excellent index in which reference is made to the footnotes and illustrations as well as the main text, must also receive comment.

Unfortunately, one must pay dearly for this book, and its price will probably succeed in keeping it off the shelves of most students, for whom, after all, it was primarily intended. On one of the earliest pages the authors have quoted from a review of the first edition (in the *British Journal of Surgery*): "Medical History should be a discipline for the mind, and inculcate into the student a habit whereby in later life he is able to implement the advice of St. Paul to the Thessalonians, 'Prove all things, hold fast to that which is good'."

P.J.W.

**A SHORT HISTORY OF NURSING** by W. R. Bett, M.R.C.S., L.R.C.P., F.S.A.(Scot.). Published by Faber. Price 12s. 6d.

A sixth-form girl who was going to be a nurse would like to read this little book. No time is spent on those vague pre-Christian women and early saints whom historians wishfully class as nurses. The story progresses from medieval times to the nurse in war, the nurse's uniform through the ages, the origins of some nursing equipment and district nursing to an appendix on the nurses portrayed (unflatteringly) in literature. Student nurses of this hospital will find much about our own medieval history to interest them.

W. E. HECTOR.

**BIOCHEMICAL VALUES IN CLINICAL MEDICINE** by R. D. Eastham. Published by John Wright & Sons Ltd., 1960. Pp. 141. Price 15s.

This is a small handbook summarising the results of about 200 different chemical pathological investigations. The author indicates the physiological values normally obtained and gives extensive lists of the pathological conditions under which they may be raised or lowered. A reference to the original literature is given after most of the tests. This book does not replace the larger text books of chemical pathology for those wishing to have an understanding of the subject, but would be useful for reference for those engaged in active ward work.

**A SHORT TEXTBOOK OF SURGERY** by Illingworth. Published by J. and A. Churchill Ltd., 1959. Seventh edition. Price 45s.

Congratulations! Professor Illingworth's Shorter Textbook of Surgery has become of age. The radical changes which have occurred in surgical opinion and technique during the past 21 years—and, indeed, though to a less extent since the last edition four years ago—have presented a great challenge to an author whose aim has been to produce a textbook "avoiding on the one hand the imperfections of the smaller handbooks and, on the other, the encyclo-



paedic unwieldiness of compilations." Today, more than ever, there is no doubt at all that the medical student requires such a book. How successful has Professor Illingworth been?

The book is well set out, easy to read and understand, and the diagrams, photographs and in particular X-rays, are very good. All the essential facts are presented, and it is instructive to note the economy of word and space compared with some of the larger textbooks. The chapters on aspects of general surgery are brief and to the point; those on orthopaedics excellent. In those on regional surgery only a brief account of the pathology is given, but the symptoms and signs are dealt with fully. Operative techniques are described succinctly—but are these not better learned in theatre? On some occasions the specific post-operative complications are omitted—e.g. no mention is made of the treatment of reactionary haemorrhage causing tracheal compression after thyroidectomy. The policy of jettisoning obsolete material has been rigidly maintained and been extended to discontinuing the chapter on the female genital tract—a subject probably better considered in the gynaecological textbooks. The section on peripheral vascular disease has been brought up to date and a brief section on blood vessel grafts added.

This book will be a great help to those starting surgery, but those who require more detailed knowledge must study the larger books—this is surely the author's intention. The student must not strive to learn minutiae, but to get a good basic understanding of general surgery. Professor Illingworth's book will help him to do just this.

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